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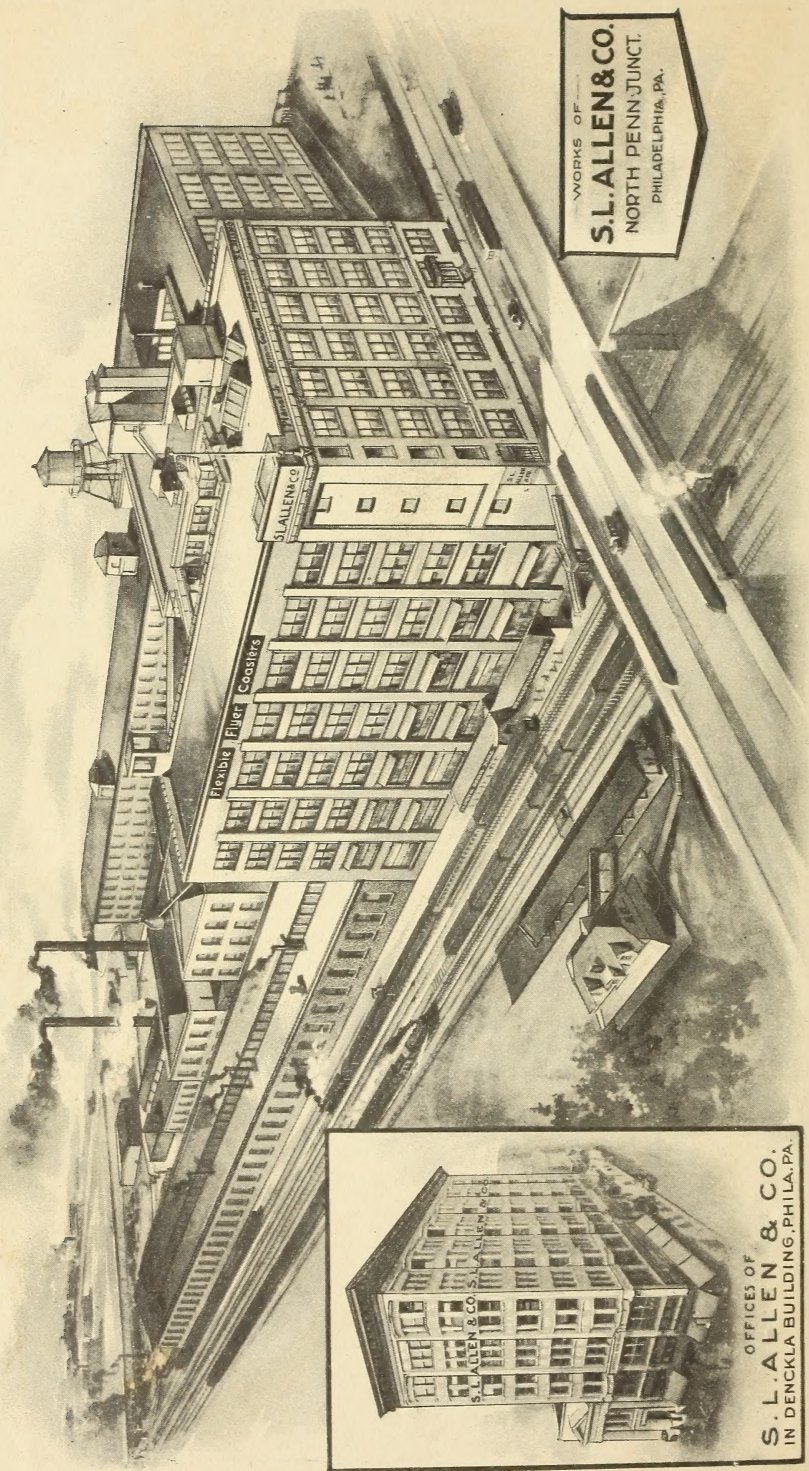
1915

Planet Jr.

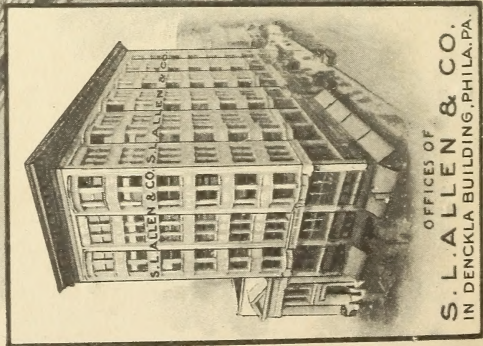


SCHULTZ'S SEED STORE
WASHINGTON, D. C.

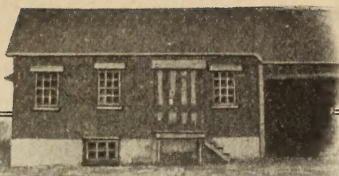
Planet Jr. Works.



WORKS OF
S. L. ALLEN & CO.
 NORTH PENN. JUNCT.
 PHILADELPHIA, PA.



OFFICES OF
S. L. ALLEN & CO.
 IN DENCKLA BUILDING, PHILA. PA.



1871

1915

AS we write (August 13, 1914), Europe with little exception is in the midst of a terrible and destructive war. Industries have been largely abandoned where the war exists, and in some localities food supplies are threatened.

In the United States, according to Government statistics, farm labor has risen 36 per cent. in the past twelve years, and 11 per cent. in the last four years, while immigration to this country has almost ceased and labor here must rise still higher.

We shall do what we can towards making good this deficiency of labor by offering the best time-saving and crop-producing devices for the farm and garden that we can design.

We are adding to our last year's line and at the same time improving the old favorites. To those who know our goods we may say, in a word, that we have gone over our whole line with careful endeavor to better them where possible.

We have added to hand tools a new watering attachment for No. 3 Seeder, two new single wheel hoes, Nos. 39 and 39½, also two new sets of thin flat sweeps, valuable to every wheel-hoe owner.

We have adopted easily replaceable axles for all our pivot wheels, also interchangeable roller-bearing boxes, dust proofed; steel ratchets and pins, spring lifts, quick-change ratchet guides, and better fitting and stronger joints.

We now offer steel handles for all one-horse cultivators.

To our list of sweeps from 5-inch to 18-inch, inclusive, we have added one of 24-inch cut and also four sizes of "one-sided" sweeps, cutting 8, 9½, 11 and 14 inches, respectively.

We are always glad to hear from our customers and from practical people with suggestions for the improvement of any tools we make or ought to make.

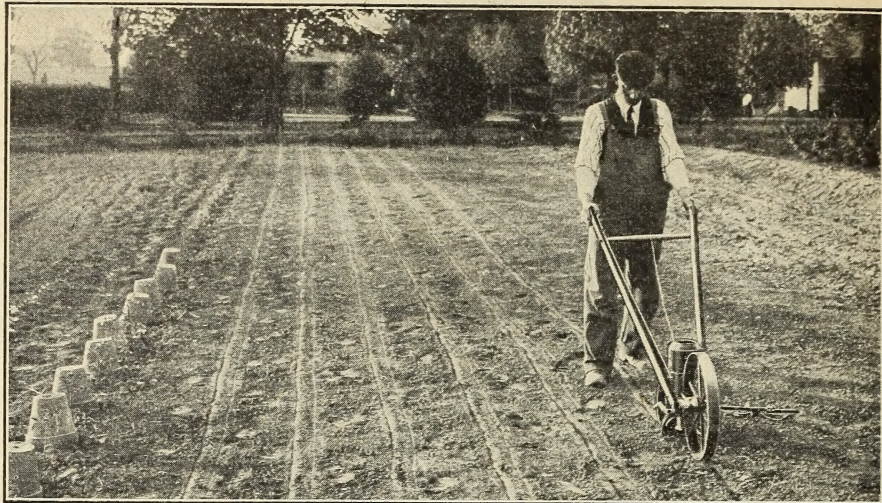


The "sled that steers"

style coaster to the line, called Flexible Flyer Tuxedo Racer. Ask for and insist on getting genuine Flexible Flyers. Special booklet on request.

No coasters ever made have had so many abject imitators. Why?—because of their perfection. Some of these imitations have fallen by the wayside during the past year, while Flexible Flyers are stronger and better than ever before, and we have added a new

J. L. Allen & Co.



It pays to use Planet Jr. Seeders in the family garden as well as in the market garden.

Planet Jr. Hill and Drill Seeders and Single and Double-Wheel Hoes, Combined and Separate.

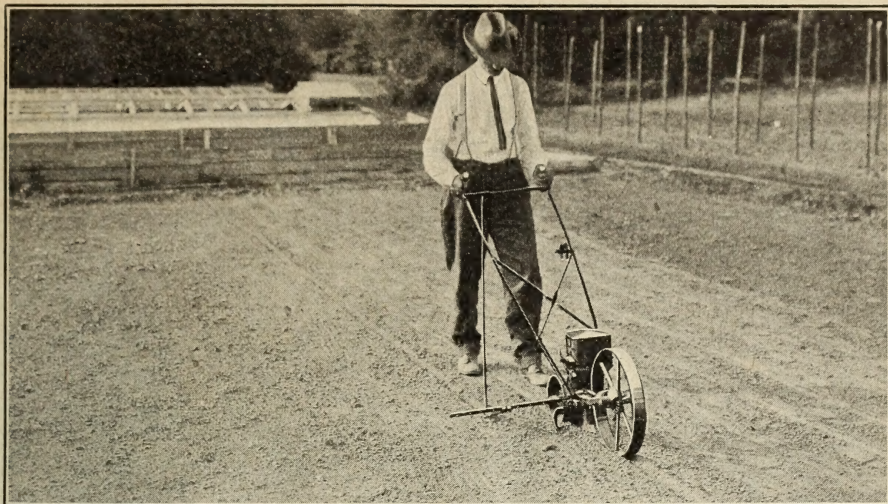
NEVER have hand seeders and wheel hoes been appreciated as they are to-day, and never has the necessity for such tools been so urgent and their value better determined. Our frequent excursions among practical men of large experience, especially among large onion growers, have enabled us at this time to construct better seed drills and wheel hoes than we have ever had before. We do not wish, however, to discard old favorites, but to offer side by side with them, improved tools which will be found in many points more acceptable than their predecessors.

We all appreciate that there is a great saving in having work well and accurately done. Rows should be at equal distances apart, and when crops are grown in hills they should be planted at regular intervals. The seed should be planted also at the proper depth and the tool must be capable of easy change for these essentials and be adaptable to different crops and conditions of soil in their cultivation.

As the wheel hoe follows the seeder, narrow and straight planting causes a great saving of labor when the time comes for weeding and cultivating; and this is a very important feature, because hoeing and cultivating are so often repeated during the season. Where plants are grown singly or even where two or three are wanted in each hill, a much better stand is obtained by using a hill-dropping seeder, while the saving of seed is not to be forgotten. Where row planting only is called for, the plain drill seeder is less costly as well as more simple. When cultivating small areas, the single-wheel hoe is often sufficient, but where the work is extensive the double-wheel hoe is more rapid and economical and more satisfactory generally.

Every garden should have Planet Jr. Tools for labor saving and to enable one to grow larger and better crops.

For the smallest gardens, from twenty-five to fifty feet square, we recommend Nos. 17, 18, 19 and 39 Wheel Hoes or the Fire-Fly Plow.



Planet Jr. No. 28 Seeder planting, covering, rolling and marking out next row at one operation.

If needing a seeder also, take No. 4 or No. 25 Combined Seeder and Wheel Hoe. For a farm garden take a Combined No. 4 or No. 28.

For the market garden a No. 3, 5 or 28 Seeder, No. 12 Double and No. 16 Single-Wheel Hoe, a 12-tooth Harrow and No. 8 and No. 10 Horse Hoes.

For the larger market gardens add to above No. 76 Two-horse Cultivators, Double and Single Celery Hillers and No. 41 Universal Cultivator.

Complete direction cards, which accompany each implement and excellent indexes, enable the grower to sow properly all the usual garden seeds, either in hills or in drills.

The following pages offer a large variety of field and garden seeders from which any one may select an excellent article. Our various styles are all adapted to the planting of a great variety of garden, fruit and flower seeds, as given below, and many others.

Apple,	Endive,	Onions for Bulbs,	Ruta Baga,
Asparagus,	Field Peas,	Onions for Sets,	Sage,
Beans,	Flower Seeds,	Parsley,	Salsify,
Beets,	Ginseng,	Parsnip,	Savory,
Cabbage,	Kale,	Pear,	Spinach,
Cantaloupe,	Leek,	Peas,	Sugar Beet,
Carrot,	Lettuce,	Pepper,	Tobacco.
Cauliflower,	Mangold,	Pickle,	Tomato,
Celery,	Marjoram,	Radish,	Turnip.
Chicory,	Melon,	Rape,	
Cucumber,	Okra,	Rice,	

H. L. GUMMER, Denville, N. J., writes June 22, 1914: "Since 1876 we have used your tools—seed drill, wheel hoe and cultivator—and we think there are none better."

JOHN G. GAYNOR, R. F. D. No. 21, Westfield, N. Y., writes May 25, 1914: "I have used the Planet Jr. tools for over twenty years, and find in all those years that they have stood the test. There are many different kinds of cultivators and small garden tools on the market, but for service and reliability the Planet Jr. heads them all."

No. 28

Planet Jr. Combined Hill and Drill Seeder, Wheel Hoe, Cultivator, Rake and Plow

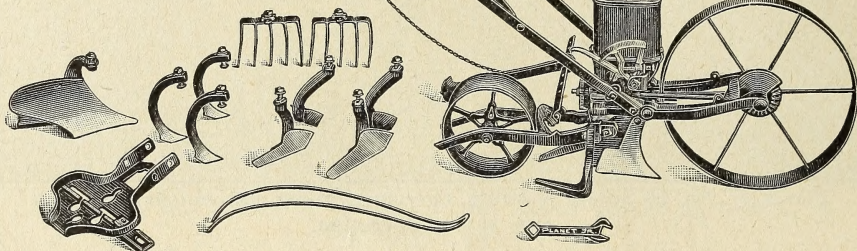
Price, \$15.00

Packed weight, 71 lbs.
Holds 3 quarts.

Equipment:

One pair 6-inch hoes.
One pair 4½-inch hoes.
Three cultivator teeth.
One landside plow.
One pair 5-tooth rakes.
One leaf guard.
One marking attachment.
Steel handles.

All oil
tempered.



This is our latest and best Combined Hill and Drill Seeder and Single Wheel Hoe. It shows in its construction the results of the last four years' close study of this class of tools and is the culmination of forty years' experience.

ACCURACY OF CONSTRUCTION makes for accuracy in operation, and saves seed and labor and insures a more even stand of plants and a more satisfactory crop.

ACCURATE CASTINGS for the vital parts of the seeding devices are made of special metal, and by the latest improved methods in the art, and have enabled us to produce a tool far more accurate in construction and in operation than anything we could offer in previous years. Our new method of delivering the seed from the hopper is superior to any that we have heretofore used, and the regularity obtained is most gratifying. In extensive field trials on one large market garden, where 100 acres of onions are sown annually by Planet Jr. Seeders, our No. 28 sowed with such perfection as to call forth unqualified approval from the grower.

WE RECOMMEND IT, therefore, as our very best seeder. It is light running; is supplied with a narrow opening plow which plants the seed in a narrow, straight line, leaving a minimum amount of hand weeding; for the weeds are usually enough to one side or the other of the straight, narrow row of plants as to be cut out easily with a wheel hoe.

AS A SEEDER it drops all garden seeds in hills, 4, 6, 8, 12 or 24 inches apart, or sows them in drills with accuracy, opening the furrow, covering, rolling down and marking the next row all at one passage. The seeds drop in sight of the operator, the rear of the spout being open and white.

THE INDEX enables the operator to adjust the flow of seed to the finest point by means of its brass thumbscrew, truly **a hair's breadth at a time** and **just what is needed**. This plan combines absolute regularity of the speed of the feed wheel with the delicate adjustment of the discharge opening. Changeable speed feed wheels with sets of holes of fixed sizes in a lot of change cylinders always getting lost, are ancient history, to say the least, and in the same class are feeding brushes and agitating fingers. Nor do we believe in trying to sow seeds through a set of plate holes of fixed sizes. Remember, too, seeds vary in size from year to year according to the season or when grown under different conditions. For instance, California seeds, generally grown on irrigated land, are usually larger than Eastern seeds of the same variety.

THE COVERERS are arranged to be changed quickly in width and depth and are especially designed to avoid clogging and to make regular work.



Planet Jr. No. 30 Single Wheel Hoe in the family garden. This is the wheel hoe portion of the No. 28 Combined Seeder and Wheel Hoe.

THE SEEDER WHEEL is 15 inches high, made of steel, with broad tires, making a light-running tool. **The index** is the most accurate and convenient we have ever made, and it enables one to make the slightest changes in thickness, **while the discharge is closed.** In turning at the ends of the rows, the **flow of seed** is stopped automatically by raising the handles sufficiently to lift the plow and roller from the ground; the sowing starts again instantly upon lowering the handles and starting the tool. In going from field to field, the sowing may be instantly stopped also by the index lever; upon starting work again, no new setting of the index is required, as the seeder remains exactly as last set.

The Steel Hopper is light and ample in size.

The Concave Faced Roller compacts the soil over the seed, but leaves it loosest in the center, and so allows the seed to come through the surface easily.

The Marker is readily operated from between the handles; it makes a clear line for the next row.

The Patent Steel Handles are a valuable innovation, at once strong, indestructible and neat in design, and the hand pieces are very pleasant for the operator. Wood handles can be supplied if specially ordered.

We make two **wider opening plows** as extras, one (No. K-517, price, 45c.) for sowing onions for pickling, opening the furrow a couple of inches wide and giving the plants a fine chance to form uniform bulbs. The other (No. K-518, price, 55c.) for sowing 40 to 80 lbs. of seed per acre in a wide band for growing onion sets.

We also make a special plow **for peat** land which fits Nos. 28 and 29 (see page 15).

No. 29 Planet Jr. Hill and Drill Seeder

Price, \$11.50

15-inch steel driving wheel. Holds 3 quarts. Steel handles.
Packed weight, 58 lbs.

This is the No. 28 as a hill and drill seeder only. No cultivating attachments.

C. H. VAN SICKLEN, 275 Ocean Avenue, Patchogue, L. I., N. Y., writes May 11, 1914: "I have used one of your Seeders for about twenty-five years past, but it has finally met an accident by misuse—got broken—and I am in a mess for fair to do by hand what it does so easily."

O. F. SHUMAN, Montgomery, Pa., writes March 28, 1914: "I ordered one of your best tools, No. 28 complete, and have it now and am certainly well pleased with it. I have used your tools before and know what they are. I know a good thing when I see and use it."

M. J. THOMPSON, Superintendent Department of Agriculture, University of Duluth, Minnesota, writes May 25, 1914: "We are now using your garden drill with attachments. It does good work."

No. 30

Planet Jr. Single Wheel Hoe, Cultivator, Plow, Rake and Marker

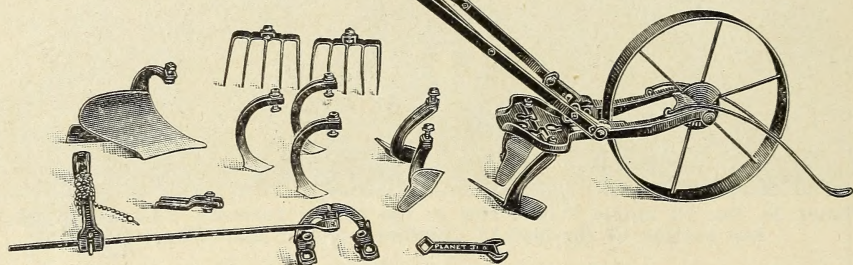
Price, \$8.00

Equipment:

One pair 6-inch hoes.	} All oil tempered.
One pair 4½-inch hoes.	
Three steel cultivator teeth.	
One large plow.	
One pair 5-tooth rakes.	
One marking attachment.	
One leaf guard.	

Packed weight, 42 lbs.

Steel wheel.
Steel frame.
Steel handles.



No. 30 is the Single-Wheel Hoe portion of No. 28 Combined Seeder and Wheel Hoe; see pages 4 and 5.

This tool has a 15-inch steel wheel, and the frame and the handles are made of steel, so the tool is at once light, strong and almost indestructible. It is the best Single-Wheel Hoe made and has the fullest equipment.

THE PLOW is the first attachment to be used in the spring. Plow deep by going twice in each furrow. Then for manure, potatoes and extra deep planting, draw furrows by going either once or twice in the row, drawing the first furrow by garden line, the rest with the marker. Then cover with the plow, going a round to the row; let the first furrow be light, the second heavy. All through the season use the plow first to throw away from the crop and then to throw back again, a few days later; excellent cultivation.

THE HOES. Until plants are 6 inches high, use the frame extension and hoe both sides of the row at one passage, using the short hoes for narrow rows.

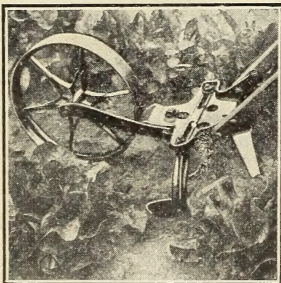
THE CULTIVATOR TEETH. These are fine for deep cultivation, and one tooth with marking attachment is just the thing for laying out rows for onion sets and plant setting. When hoeing between rows use one tooth ahead with the two hoes following.

THE RAKES used together may be set either to be pulled or pushed for leveling and fining the surface; and singly for surface cultivation. Pull them when surfacing.

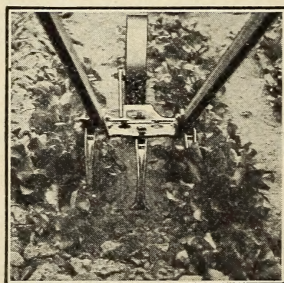
LEAF GUARD. With this helpful attachment peas, carrots, parsnips, beets, cucumbers, strawberries, etc., can be worked perfectly without extra labor, when otherwise it would be impossible to cultivate them closely.

THE MARKING ATTACHMENT is most important; with it the rows are easily made regular and wheel hoeing is then rapid and economical.

This fine combination is indispensable for the market gardener and invaluable for the private family garden.



Hoes only. Thorough work in salad.



Cultivating between rows, 12 to 14 inches apart.

No. 4

Planet Jr. Combined Hill and
Drill Seeder, Wheel Hoe,
Cultivator and Plow

Price, Complete, \$11.00

As a Seeder Only, \$9.00

Steel Driving Wheel. Weight complete, 50 lbs.
Holds 2½ quarts.

Equipment:

One pair of 6-inch hoes.	} All oil tempered.
Three cultivator teeth.	
One garden plow.	
One leaf guard.	
One marker.	



THE NO. 4 PLANET JR. SEEDER, WHEEL HOE, CULTIVATOR AND PLOW is a prime favorite with gardeners, and especially those who while not having a large acreage, get a lot of pleasure and profit from using a seed drill and wheel hoe to plant and cultivate their family garden. Even those who think they haven't quite enough work to warrant buying a drill will find that this combined tool will quickly pay for itself in satisfaction, in labor saving, and in increased crops. It combines in a single convenient implement:

1. A capital hill-dropping seeder.
2. A continuous row seeder.
3. An admirable single-wheel hoe.
4. A splendid wheel cultivator.
5. An excellent furrower.
6. A rapid and efficient wheel garden plow.

The machine is easily pushed and the great variety and the fine design of the attachments please every one who uses them. It is particularly valuable for planting and cultivating such crops as onions, spinach, turnips, lettuce, celery, radish, peas, beans, beets, parsley, parsnip, salsify, although it sows all garden seeds.

WHAT IT WILL DO. It will sow all garden seeds in continuous rows with great uniformity and also drop with accuracy in hills, 4, 6, 8, 12 or 24 inches apart and at the same passage mark the next row. **The feed is automatically stopped** by raising the handles, and started by lowering them and starting the tool.

AS A SEEDER the No. 4 is accurate, simple, durable, reliable and easy-running, doing first-class work in every particular. **The sowing device** consists of a feed wheel with four wings arranged on a spindle and driven by beveled gears from the main wheel. **The feed wheel**, revolving in a brass cylinder which opens into the hopper above, agitates the seeds so that they drop in a regular stream, through a diamond shaped opening at the bottom. This opening may be adjusted by an accurate brass set screw and cut-off sliding on the outside of the cylinder and connected to a lever and index at the right-hand side of the hopper. **The index** contains the names of the principal seeds and indicates the proper adjustment of the seeder for sowing in hills and drills separately. Having set the index for any seed, the feed can be shut off instantly, yet opens again automatically at the proper size, and may be changed a hair's breadth at a time. **A cut-off lever** is easily operated by the hand or foot from between the handles, and the index shows clearly whether the drill is sowing or not. **When dropping in hills** the seeds fall from the hopper upon a shutter which closes the spout. This shutter is lifted at regular intervals by a toothed

L. W. WHEAT, Alton Station, Ky., writes September 15, 1914: "People don't understand the extraordinary value of Planet Jr. tools. You can't buy my No. 4 Combined Seeder for \$100.00 and have me without one."

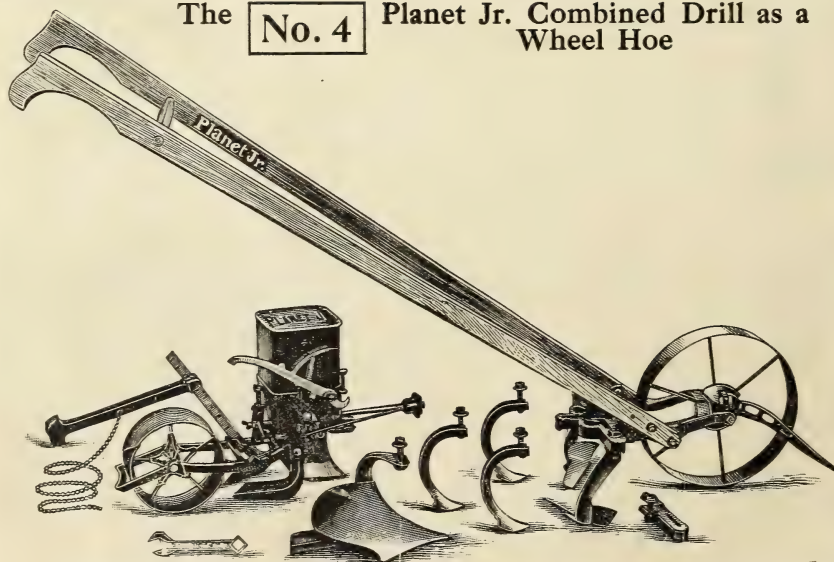


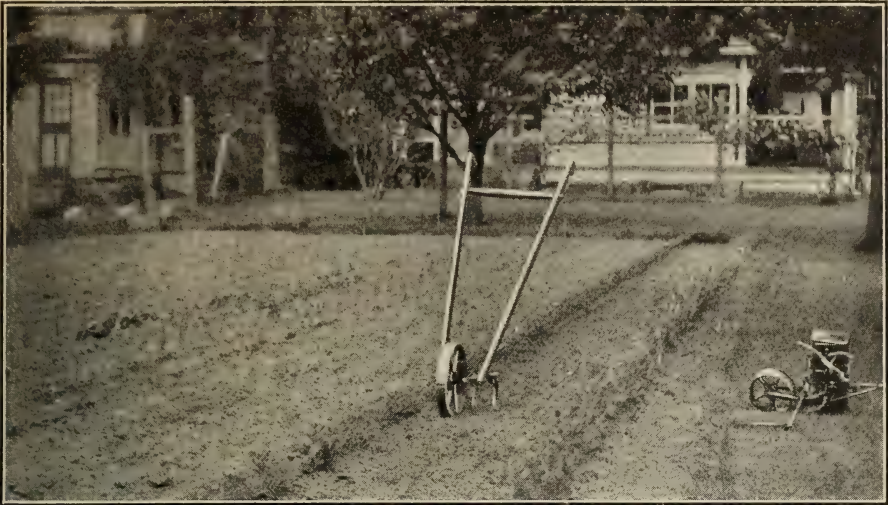
An extensive onion grower's outfit of Planet Jr. Seeders.

No. 4—Continued

spacing wheel at the back of the hopper and the seeds are dropped in neat hills. The spacing wheels drop 4, 6, 8, 12 or 24 inches apart. The hill-dropping mechanism is substantial, positive and exact. The change from hill dropping to drill work and vice-versa can be made in a moment. To sow in a continuous row, the dropper is hooked up. **The feed wheel** is stopped instantly without interfering with the adjustment simply by raising the handles, when roller drops and throws the cogs out of gear. Lower the handles when you wish to start the feed. **The handles adjust** to suit

The No. 4 Planet Jr. Combined Drill as a Wheel Hoe





The owner of every family garden should have a Planet Jr. Combined Seeder and Wheel Hoe.

No. 4—Continued

man or boy and are of such shape as makes pushing easy. **The tool is simple**, and we are told runs only half as hard as some of the old agitator patterns.

In seeding **drop** beans, parsnip and spinach, carrot, turnip and onion seeds, beets and okra in hills. **Sow** peas and celery, cabbage for plants and onion seed for sets, in drills.

FOR USE AS A WHEEL HOE, the seeding parts are removed and the tool frame substituted by changing but one bolt. It is then a fine single-wheel hoe with an admirable variety of tools and a rapid-change frame, with side extension shown in the cut, for hoeing both sides of a row at one passage, all in most convenient form.

If your garden is small you may break it up with the turning plow, running twice in a furrow and as deep as possible. If large, a horse plow should be used or the ground should be well spaded. As a wheel hoe, with one cultivator tooth mark out rows for onion sets and for plant setting. With the plow going and returning in the furrow, open drills for manure, potatoes, large seeds, etc., and cover with a furrow from each side. During the growing season hoe, cultivate deep or shallow, plow to or from, just as needed.

THE LARGE GARDEN PLOW makes furrows and covers them, and plows to and from the garden crops, and is constantly useful from spring till fall.

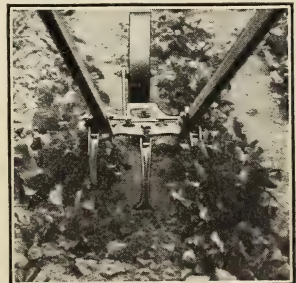
GARDENERS AND FARMERS, and those having but a family garden, who feel that they "haven't quite enough work for a drill to do" will find this combined tool one of the most



Shallow cultivation in wide rows, using a pair of 6-in. hoes and cultivator tooth. Finest kind of work.

useful and efficient of helpers. With this implement one can do almost all the work in his small crops. In the market garden or in the large kitchen garden alone, it will quickly pay for itself. It does so many different kinds of work that it will be found one of the most **profitable** tools that one can own.

THE PAIR OF HOES is the most useful of all the attachments. Use them for 8, 10 and 12-inch rows, and



Deep cultivation of lettuce. Thorough mulching.



The Planet Jr. No. 3 Hill and Drill Seeder is a favorite with market gardeners.

No. 4—Continued

for 12 inches and upwards use one or more cultivator teeth between the hoes.

The shield form of the hoes and their leaf-lifting shape, the forward slanting cut and their rounding cut next the row enable one to run them safely very close to the crop, without danger to leaf or root.

THE WHEEL is made of steel, strong and durable, having heavy steel spokes.

THE THREE HOLLOW STEEL STANDARD CULTIVATOR TEETH are used for all deep and thorough work, and are also adapted to shallow cultivation and marking out, and for working 6-inch rows.

THE EXTENSION PIECE is used for hoeing both sides of the row at one passage while plants are small.

THE LEAF LIFTER is invaluable for late cultivation, making it quite easy to work crops closely without additional labor, when otherwise it would be almost impossible to work them at all; especially such crops as peas, carrots, beets, strawberries, etc.

RAKES. We can supply three malleable rakes with this machine with three, five and seven teeth respectively; valuable for fining and leveling the surface and for shallow and rapid cultivation. Price, with these rakes, \$12.25.



Opening furrow with plow for fertilizers, peas, beans, etc.

SPECIAL PEAT LAND PLOW (K-362) and special plow for sowing seed for onion sets (K-280) can be supplied. Price, each, 45c.

THE DISC HOES and special cultivator teeth, double moldboard plow, onion harvester and special peat land hoes, shown on page 33, will also fit this machine.



7-inch cultivating rake in lettuce.

No. 25

Planet Jr. Combined Hill and Drill Seeder, Double and Single Wheel Hoe, Cultivator and Plow

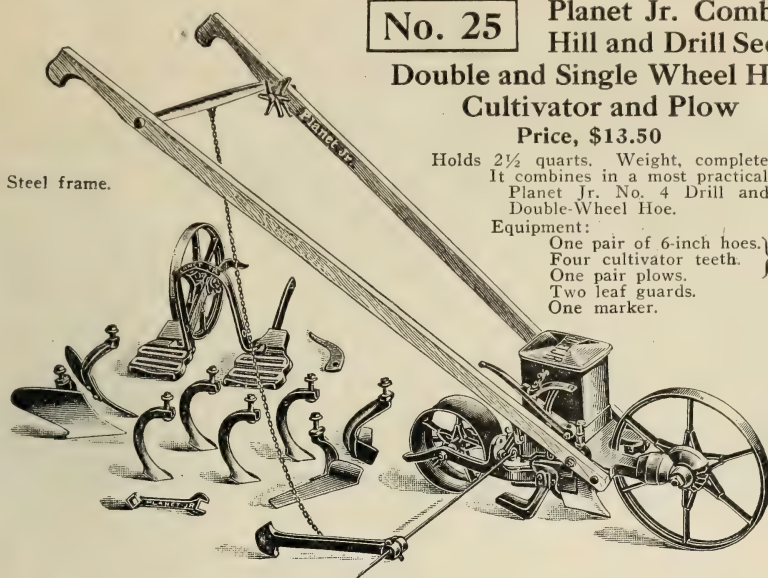
Price, \$13.50

Holds $2\frac{1}{2}$ quarts. Weight, complete, 61 lbs.
It combines in a most practical way the
Planet Jr. No. 4 Drill and No. 12
Double-Wheel Hoe.

Equipment:

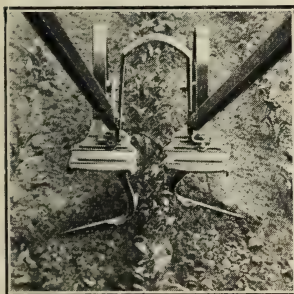
One pair of 6-inch hoes. } All oil
Four cultivator teeth. } tempered.
One pair plows.
Two leaf guards.
One marker.

Steel frame.



THIS combination is intended for gardeners who have a large enough acreage in crops for a double-wheel hoe to be used to good advantage, and yet prefer not to buy seeders and wheel hoes separately; and for the family garden where a double-wheel hoe is preferred. Also especially for the onion grower. The hopper is ample for onions and the double-wheel hoe exactly right for them. (See description No. 4, pages 7 to 10, of the seeder and what it will do.)

As a seeder it is practically the same as the **Planet Jr. No. 4**; will sow in drills any thickness or drop in hills 4, 6, 8, 12 or 24 inches apart; it has the same feed, hill-dropping mechanism and **automatic device** for stopping the feed, and has also a capital seed index. It is thoroughly substantial and is accurate in planting all kinds of garden seeds in either hills or drills. For further description see pages 7, 8, 9, 10.



First hoeing. Notice the condition of soil before and after the hoes.

The seed hopper is ample, holding $2\frac{1}{2}$ quarts. Feeding may be stopped instantly by raising the handles and also by pushing down the index bar.

THE SIMPLICITY of this tool, both as a seeder and as a wheel hoe, makes the combination thoroughly practical.

AS A WHEEL HOE it is practically the same as the **Planet Jr. No. 12** Double-Wheel Hoe, Cultivator and Plow shown and described on pages 22 and 23.

For 1915 we make this tool with **steel frame**, practically indestructible.

PRESTON MILLER, Sioux City, Neb., writes April 14, 1914: "Bought a No. 25 Planet Jr., and have sowed 25 acres of onions and would not have any other machine."

ANDREW BOSS, Agriculturist of the University of Minnesota, St. Paul, Minn., writes July 5, 1912: "We are using the Planet Jr. implements to considerable extent, and I think we appreciate fully their value. Shall purchase more of them as needed."



Planet Jr. Seeders at work near Budapest, Hungary. Appreciated the world over.

No. 25—Continued

The wheel arch is removed when the tool is used as a seeder.

To use as a single-wheel hoe, place the wheels close together on the inside of the wheel arms.

THE HOES are of a special form, which enables the operator to run very close to the row without endangering either leaves or roots, yet doing clean work and leaving the ground almost perfectly level. They are the most useful of all the attachments. Use them for 8-inch, 10-inch and 12-inch rows, and add one or more cultivator teeth for wider rows.

THE CULTIVATOR TEETH, the latest style with narrow neck, do thorough work, yet leave the ground practically level. Use for all deep cultivation; also well adapted to shallow cultivation and marking out, and for working 6-inch rows.

THE PLOWS are arranged to be used points together for furrowing out for manure, fertilizers, potatoes, seeds, etc., and reversed for covering and for making up rows for setting out plants. Later in the season they are used also for cultivation. First, straddle the row and plow shallow furrows away from the crop, then change the plows and throw the earth back again. This gives thorough and excellent cultivation, hilling the crop much or little as desired, and covering all weeds and grass. Afterwards, the space between the rows may be finished by using the cultivator teeth.

Two acres a day can easily be covered with this implement, and when done it will be better worked than several men could have done it in the same time with hand hoes.

R. D. HORTON, Box 176, Blossburg, Pa., writes June 9, 1913: "My wheel hoe and drill, purchased of your firm, has been in use over thirty years and is a good tool yet."

A. D. D. WOOD, Lansing, Mich., writes February 7, 1913: "I shall never buy another Planet Jr. Seeder, for the one I have will never wear out."

JOHN R. McKELVIE, Norwood, Ont., writes February 5, 1913: "I purchased one of your No. 25 Planet Jr. Machines last year and am more than satisfied with it. It does all you claim and more. I first purchased one of your No. 25 Machines fifteen years ago and could not possibly garden without one. I use it for everything in gardening. I never fail to put in a good word for the Planet Jr. Machine, as I believe it to be the *only* hand garden machine made. I have tried others."



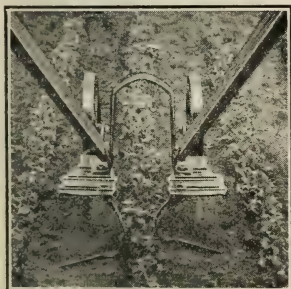
Hoeing spinach with the Double-Wheel Hoe portion of Planet Jr. No. 25 Combined Hill and Drill Seeder.

No. 25—Continued

THE LEAF LIFTERS are invaluable in late cultivation, making it quite easy to work crops closely without additional labor, when otherwise it would be impossible to work them at all; crops such as peas, carrots, beets, strawberries, etc.

THE MARKER makes a plain line, marking distances from 6 to 20 inches, and is easily changed from side to side, from between the handles.

The same tools are used on all our combined machines and work perfectly on each of them. **Many different combinations and methods of special cultivation will suggest themselves to the practical gardener.**

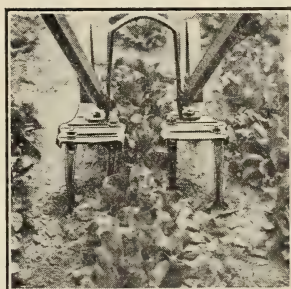


Hoeing both sides at once.
Easy and rapid.

ONION SET PLOW.

A special plow (K-280) leaving seed in a wide band fits this tool, and is sold as an extra. Price, 45c. Also special **peat land plow** (K-362). Price, 45c.

The **disc hoes** and special **3-prong cultivator teeth**, and the **double moldboard plow**, **onion harvester** and special **peat land hoes**, shown on later pages, will also fit this machine.



Cultivation, deep and thorough.

E. THOMPSTONE, Esquire, B. Sc., Deputy Director of Agriculture, Northern Circle, Burma, India, writes November 27, 1912: "I have the honor to state that we have already imported, tried and approved of several of your machines, *e. g.*, hand and Horse Hoes. They are suitable for many purposes here. We have distributed a few and the Department constantly makes use of them."

J. HALSEY MALLORY, Columbia, S. C., writes April 29, 1913: "About a month ago I bought a Planet Jr. Combined Hill and Drill Seeder, Wheel Hoe, Cultivator and Plow. This useful tool has been more than satisfactory and has been a great time-saver."

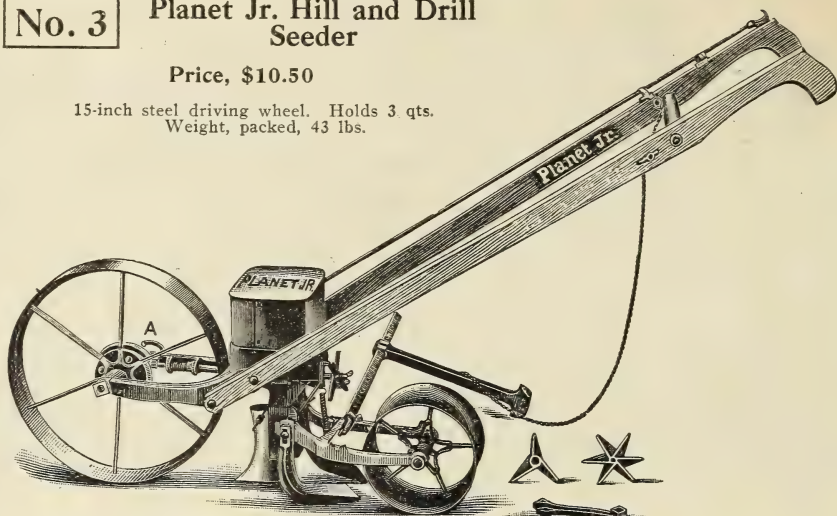
A. OSWALD, Atwater, Ohio, writes May 7, 1913: "The Planet Jr. just received and tried out. It cannot be beat. That's enough."

No. 3

Planet Jr. Hill and Drill Seeder

Price, \$10.50

15-inch steel driving wheel. Holds 3 qts.
Weight, packed, 43 lbs.



THE NO. 3 PLANET JR. SEEDER is our popular size at a popular price. We recommend customers to buy separate seed drills and wheel hoes where they have enough work to warrant it, and this or No. 29 is the size that should be bought by every one except the largest market gardeners, sugar beet growers, etc.

THE STEEL DRIVING WHEEL, with heavy steel spokes, not "piano wire," is of proper height, with broad face, making the tool light and easy running, even with the hopper filled to the brim.

THE SPECIAL FORCE FEED is admirable, working equally well whether sowing with an ounce or a full hopper.

WHEN DRAWN BACKWARD the feed wheel is thrown out of gear.

When passing from field to field the cam lever at "A" may also be used to throw gears out of contact.

THE HILL DROPPING is simple and reliable, spacing hills either 4, 6, 8, 12 or 24 inches apart.

CHANGES OF DISTANCE between hills may be made in less than a minute, by substituting one spacing wheel for another.

FROM HILL TO DRILL—This change is made or reversed almost instantly.

THE INDEX—The thickness of seed is regulated by an accurate index with brass screw adjustment; it contains the names of the important seeds, and is carefully graduated, both for hills and drills. It is within easy reach at the top of handle.

THE CUT-OFF—The flow of seed is instantly stopped by pulling the cut-off at the top of the handle, and started as quickly by reversing. Not a hill need be missed in starting, nor any seed wasted in stopping.

THE OPENING PLOW is malleable and adjustable for depth, and sows in a narrow line, making close wheel-hoe cultivation easy, saving nearly all hand work, as the weeds usually stand a little to one side or the other of the row and are quickly exterminated, to the great surprise of the unaccustomed operator.

MILLARD COX, Route No. 4, Hooperstown, Ill., writes February 23, 1914: "The planter that I received last year was perfectly satisfactory. I think your Planet Jrs. are good."

C. W. MATHEWS, Horticulturist, Kentucky Agricultural Experiment Station, State University, Lexington, Ky., writes January 22, 1914: "We have several of your implements in use on our Experiment Station farm and they are giving very excellent satisfaction."



THE COVERERS are adjustable to throw more or less earth on the seed. The **Roller** is broad and hollow faced, leaving a convex surface over the seed which has the effect of letting the plants come through the ground more easily. The **Marker Rod** is steel and the drag bar makes a clear line and is adjustable from 6 to 20 inches. The marker is changed from side to side **from between the handles.**



Peat Land
Plow

A SPECIAL 4-INCH PLOW (K-281) and covers (K-227-8) for onion seed for sets, fit No. 3 and No. 5 Seeders. Price, \$1.00 for the set.

PEAT LAND PLOW. As shown in cut, we offer a special plow (K-282) for peat lands, which gives great satisfaction. It opens and pushes aside the loose, spongy soil and makes a narrow track for the seed, which comes up in a narrow line, easily cultivated and conducive to a large crop. Price, 55 cents.



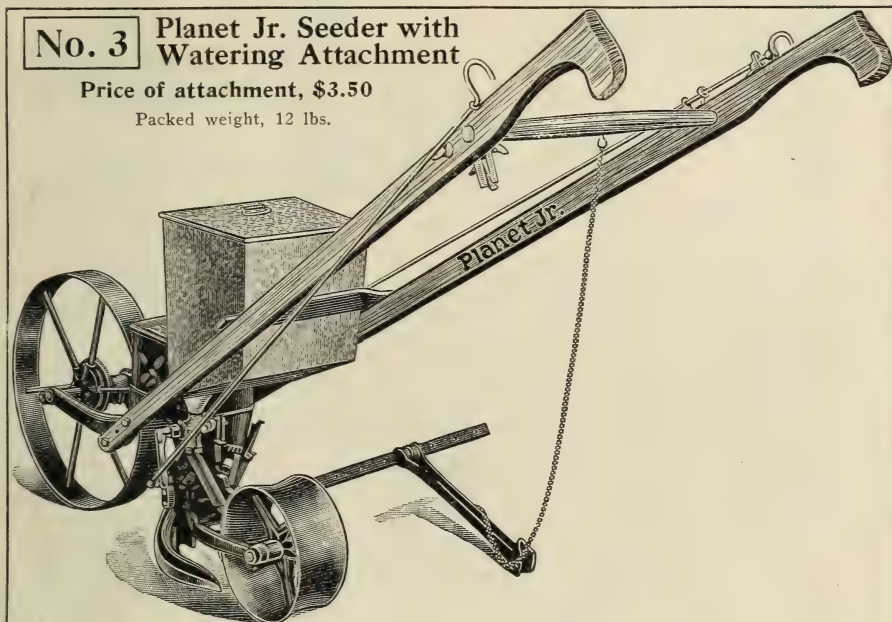
Onion Seed Plow
and Covers

No. 3

**Planet Jr. Seeder with
Watering Attachment**

Price of attachment, \$3.50

Packed weight, 12 lbs.



WATERING ATTACHMENT. This new attachment for applying water, formaldehyde or liquid fertilizer is demanded in this day of intensive farming and gardening. **It makes no change** in the seeder.

The reservoir holds 8 quarts and the liquid is delivered directly with the seed and in any quantity desired by the operator, the discharge being controlled at the top of the handles with rod and set screw.

Formaldehyde or a soluble fertilizer may be applied with the water directly with the seed, securing rapid, safe and satisfactory results.

The irrigation of the seed at time of planting will be found beneficial in many instances, as work may proceed without interruption by dry weather. Price, \$3.50.

No. 5

Planet Jr. Hill and Drill Seeder

Price, \$13.00

16½-inch steel driving wheel.

Holds 5 qts.

Weight, packed, 52 lbs.

NO. 5 SEEDER is undoubtedly the best seeder we make for market gardeners, sugar beet and bean growers, onion set growers and other **large** planters. The style of construction is the **same as in No. 3**, the valuable mechanical features being common to both. It drops in hills 4, 6, 8, 12 or 24 inches apart.

No. 6

Planet Jr. Hill and Drill Seeder,
Wheel Hoe, Cultivator and
Plow Combined

Price, Complete, \$13.50

As a Hill and Drill Seeder Only, \$11.00

16½-inch steel wheel.

Weight, complete, 64 lbs.

Equipment:

One pair 6-inch hoes.
 Three improved steel cultivator teeth. } All oil
 Large garden plow. } tempered.
 Improved double leaf guard.
 One marker.



THE NO. 6 PLANET JR. COMBINED HILL AND DRILL SEEDER drops all garden seeds in hills and sows in drills with great regularity, in a narrow line, to any exact depth required, covers, rolls down and marks the next row, all at one passage. It drops 4, 6, 8, 12 or 24 inches apart. There are three change wheels, giving five distances.

THE SEED FALLS IN FULL VIEW, as the rear of spout is open.

THE WHEEL is 16½ inches high, making an easy-running seeder.

THE INDEX is in open view and is accurately adjusted with a brass thumb screw.

A HANDY CUT-OFF is operated by the thumb and forefinger of the right hand.

THE OPENING PLOW is of new shape, leaving the seed in a narrow line.

THE COVERERS are ample in size and have sufficient opportunity to swing.

THE ROLLER is large, wide and hollow faced.

THE MARKER makes a plain line, marking distances from 6 to 20 inches.

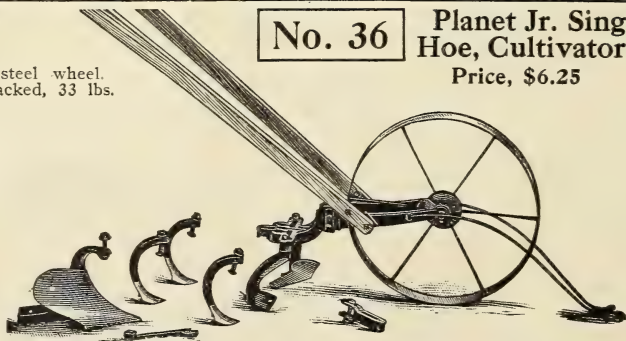
THE HANDLES ADJUST to the proper height for either man or boy.

No. 36

Planet Jr. Single Wheel
Hoe, Cultivator and Plow

Price, \$6.25

16½-inch steel wheel.
 Weight, packed, 33 lbs.



No. 36 is the Single-Wheel Hoe portion of the No. 6 Combined Tool.

NO. 36 PLANET JR. has a high steel wheel and will suit many persons who like a high-wheel machine.

THE FRAME is strong and the design enables attachments to be quickly changed.

THE CULTIVATOR TEETH are steel and work well either deep or shallow.

THE PLOW is continually useful from spring till fall.

A NEW DOUBLE-LEAF GUARD, light and efficient, does excellent work.

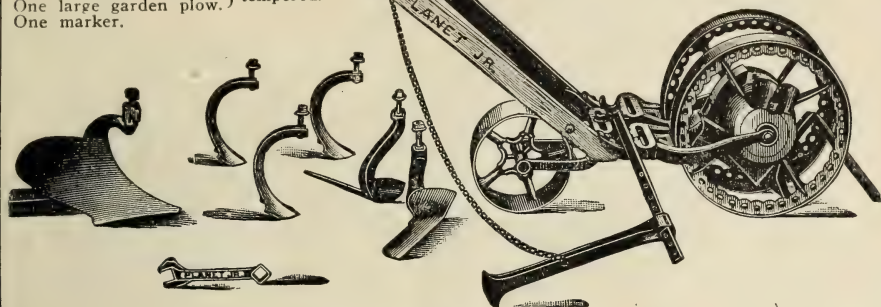
No. 1 Planet Jr.
Combined Drill
Seeder, Wheel Hoe, Cultiva-
tor and Plow

Price, with tools as shown, \$9.50

Holds 3 pts.
Weight, packed, 47 lbs.

Equipment:

One pair of 6-inch hoes. } All oil
Three cultivator teeth. } tempered.
One large garden plow.
One marker.



THE OLD RELIABLE PLANET JR. NO. 1 AND NO. 2 SEEDERS have given complete satisfaction for over thirty years, are used the world over and are still popular.

FROM A DRILL the No. 1 is changed to a wheel hoe by unscrewing two bolts and removing the plow, coverer and roller, when hoes, plow or cultivator teeth may be quickly attached.

THE SHIELD SHAPE and forward slanting cut of the 6-inch hoes and their rounded shape at the bend enable one to run them safely very close to the row, doing thorough work and leaving the ground level.

THE HOES may also be changed from side to side, and the plants worked still closer and deep or shallow. **Work cannot be done better.** It captivates all who see it; thousands of persons need a combined tool. All its operations are **rapid, easy and delightful.**

THE SET OF CULTIVATOR TEETH are always useful for deep work or when the ground becomes baked or too hard. They are the latest style with narrow neck, do thorough work, yet leave the ground practically level.

THE PLOW is of superior design, complete with land-side; is large and capable of heavy work and is generally the first attachment to be used in the spring.

WITH A SINGLE TOOTH and marker, neat rows may be run out, six to twenty inches apart, suitable for onion sets, small plants, seeds, etc.

Every purchaser of the No. 1 machine will find it an excellent seed sower; a first-class double-wheel hoe for use while plants are small, also taking the place of a single-wheel hoe; it is an excellent furrower, an admirable wheel cultivator, a rapid and efficient wheel garden plow, has an excellent variety of tools, is easily adjusted, light, strong and pleasing. It is a practical, every-day time, labor and money-saver. With a pair of 5-tooth rakes added, \$10.25.

CHAS. BUCHANAN, Rural Route No. 3, Flesherton, Ont., Can., writes March 24, 1914: "The implement (No. 1 Seeder) has given us excellent satisfaction although we have had it nearly fifteen years."

D. O. BARNES, Vanderbilt, Mich., writes March 13, 1912: "I think that your tools are all right for any farmer. I have used one of your Planet Jr. Seeders and it is O. K."

A. H. HISE, Laurel Springs, N. J., writes October 20, 1911: "I have your Cultivators, Drills, etc., and have always proven satisfactory and you may rest assured whenever I buy new labor savers, they will be Planet Jrs."

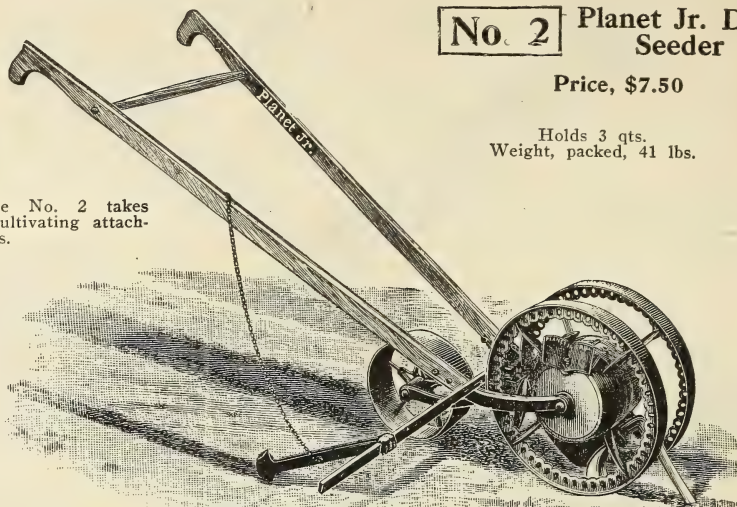
HAROLD WELCH, Elk City, Idaho, writes: "Have used the Wheel Hoe and Hand Seeder, and found them to be better than any other make."

No. 2 Planet Jr. Drill Seeder

Price, \$7.50

Holds 3 qts.
Weight, packed, 41 lbs.

The No. 2 takes
no cultivating attach-
ments.



The No. 2 Seeder

THE SOWING CYLINDER of both No. 1 and No. 2 Seeders is a drum of spring brass set between the driving wheels, with a sliding brass band secured in position by a cam. In drum and band are corresponding diamond-shaped discharge openings, and the sliding band is quickly adjusted for any kind of seed. Inside the drum, shields protect the openings and insure regular sowing, either with a full hopper or a thimbleful of seed. Wheeling around on the roller stops the flow of seed.

THE INDEX contains the names of the principal seeds. The drill is set right for any seed when the name appears through the slot. **The change** is made by opening the cam, sliding the band to the required place, then closing it.

THE OPENING PLOW, directly between the wheels, follows the irregularities of the ground, is adjustable and **opens the furrows at a uniform depth.**

THE COVERING is done by the carrying wheels, the plow throwing the earth on the rims, which return it exactly on top of the seed.

THE MARKER ROD is steel, easily changed from side to side from between the handles.

THE CLEARING FINGER is very useful among stones, trash, etc.; lower than the plow, it leaves a clear track.

THE ADJUSTMENTS for sowing different seeds at different depths, for rolling heavier or lighter, for changing the width of rows and for regulating the height of the handles are all quickly made.

These seeders are simple, having no agitators, belts or gearings to injure the seed. They plant all varieties of garden seeds admirably and are especially adapted to planting small seeds shallow, the plow being directly between the wheels and sure to open at a regular depth. They are also strong, easily set and easily understood.

W. A. LYSTER, Independence, Kan., writes April 1, 1912: "About twenty-four years ago I bought a Planet Jr. Combined Drill Seeder and Wheel Hoe, and it is as good as ever it was."

ED. J. KING, Carnforth, Granum, Alta., Canada, writes April 10, 1912: "I have used your Planet Jr. Seeders for several years and am using them this year. I could not do without them."

FRED W. WATSON, Creston, British Columbia, writes April, 1912: "We are still using a No. 2 Planet Jr. Drill Seeder, which we purchased when we were in England some ten years ago, and it is still as good as ever."

NO. 20 is simple, strong, reliable and durable, and complete with plow, coverer, roller and marker.

THE DRIVING WHEEL is 20 inches in diameter with a 2-inch face.

THE HOPPER holds one-half bushel. A quick reciprocating motion feeds the fertilizer evenly through a rear discharge mouth, regulated by a feed rod and an index at the top of handle.

THE INDEX is graduated and is controlled by a brass thumb nut and slide. The tool is instantly thrown out of gear by the feed rod.

WHAT IT WILL DO.

It will sow fertilizers evenly from 100 lbs. to 1,000 lbs. to the acre; with material in any reasonable condition it will not clog; is galvanized, has no gears or feed wheels.

IT SOWS PEAS, BEANS and other large seeds with great perfection, opening the furrow, covering, rolling down and marking next row, all at one passage.

EXCELLENT FOR SOWING IN THE FURROW.

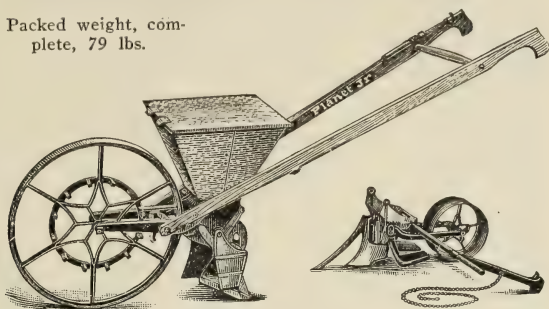
No. 20

Planet Jr. Fertilizer, Pea and Bean Seeder

Price, complete, \$17.00

Plain (less Opening Plow, Coverer, Roller and Marker), \$14.00.

Packed weight, complete, 79 lbs.



No. 21

Two Wheel Combined Hill and Drill Seeder and Fertilizer Drill

Price, \$19.00

Packed weight, 95 lbs.



NO. 21 has been much improved and meets the demand for a drill to sow seed and fertilizers at the same time. **This tool** may be used to sow seed only, in either hills or drills, as desired; or to sow fertilizer only; or to sow both together. Its work is equally perfect when used in any of these ways. It sows all garden seeds in hills, 4, 6, 8, 12 or 24 inches apart, or in drills, and also fertilizer, placing it above or below the seed as desired. **The quantity** is regulated by our patent feed rod and index at the top of the handle. **The seed hopper** holds 2 quarts; the fertilizer hopper 4 quarts.

NO. 21 is growing in popularity and the demand indicates satisfaction given.

While performing a double service, it does not run too hard for the work accomplished. The parts are galvanized and the whole get-up is a desirable one.

ALL ADJUSTMENTS for thickness are easily made from between the handles.



Planet Jr. Wheel Hoes are used by seed growers in this and many foreign countries.

DOUBLE AND SINGLE WHEEL HOES

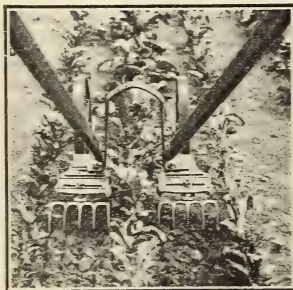
WHHEEL HOES are companion implements to the seeder, but usually pay for themselves more quickly. Indeed, many people who can scarcely be recommended to invest in a seeder, may be very properly advised to buy a wheel hoe. No one who has even a small family vegetable garden can afford to be without a Planet Jr. Wheel Hoe if his time is at all valuable. For example, a dozen rows 50 to 100 feet long of different vegetables, may be worked beautifully in one-half hour.

Our field scenes will be of interest as showing how the tools are appreciated, both at home and abroad; in fact, wherever thorough, rapid hand work is required.

If you have never used any of these tools, rest assured that the saving and satisfaction are enormous. They will do all they are recommended to do: hoeing, cultivating or plowing both sides of a row at once or all the space between two rows at one passage at the speed of a moderate walk. By using these labor-saving tools, growers may safely plant and easily cultivate four times the acreage that they otherwise could do. For example, with onion rows twelve inches apart a man can hoe about 2 acres a day; or if not wishing to increase the amount grown, the time and money saved by the use of wheel hoes soon quickly repay their cost.

We make them single and double wheel, with various attachments, and also in combination with seeders, as shown on previous pages. We recommend the lower-priced and smaller tools for very small gardens. They are especially gotten up for such places, while the more expensive ones, more fully equipped with tools, are intended for a greater variety of work and are suitable for the largest market-gardens and farms.

The **greatest improvement** perhaps that we have made for a long time in wheel hoes is the introduction of **steel frames and wheel arms**. They make the tools almost indestructible, **yet lighter and more convenient** than the old style cast frames.



Surface cultivation of well-grown crops to keep an earth mulch between rows.

THE PLANET JR. DOUBLE WHEEL HOES

are the **greatest hand cultivating tools in the world for the onion and small sugar beet grower**, and also for every grower of garden and market-garden crops from drilled seed. They do more and do it better and easier than can be done in any other way, where rows are too close for horse work.

No. 11**Planet Jr. Double
Wheel Hoe****Price, \$9.00**

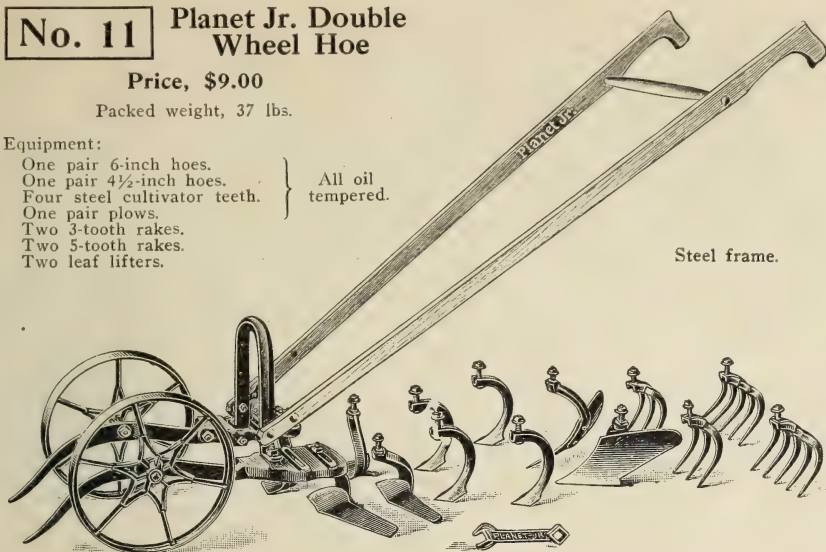
Packed weight, 37 lbs.

Equipment:

One pair 6-inch hoes.
 One pair 4½-inch hoes.
 Four steel cultivator teeth.
 One pair plows.
 Two 3-tooth rakes.
 Two 5-tooth rakes.
 Two leaf lifters.

All oil
tempered.

Steel frame.



NOS. 11, 12, 13, 13½ AND 14 DOUBLE WHEEL HOES all have the same style steel frames, wheels and handles.

WHEELS for wheel hoes, being but **depth regulators**, are most serviceable about 11 inches high; they are light and easily handled and run steadily. Ground

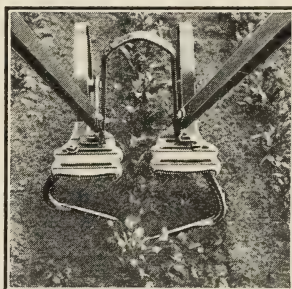
should be well fined and prepared for seeding or for working with wheel hoes.

THE TOOL FRAMES

for 1915 are made of pressed steel instead of malleable or cast iron. This is a radical improvement and makes the machines almost indestructible. The frame can be set at different heights to suit each kind or depth of work, and change of teeth or change of position can be made in a few seconds.



**Cultivating and stirring
deeply.**



**Hoeing both sides at once,
throwing a little earth
toward the plants.**

OUR SEED DRILLS we do not make as an attachment for our Double-Wheel Hoes, but we combine a Double-Wheel Hoe with No. 4 Seeder, as shown on pages 11, 12 and 13.

JOHN A. H. OWENS, Charlestown, Ind., writes May 19, 1914: "Some fifteen years since I bought one of your No. 13 Planet Jr. Cultivators and have used it ever since with success and entire satisfaction."

D. A. SOULE, Pittsfield, Mass., writes April 10, 1914: "I have used Planet Jr. tools for the last five years and like them very much."

WILLIAM SMITH, 17 Northrup Place, Buffalo, N. Y., writes April 22, 1912: "I purchased one of your Double Wheel Hoes, No. 11, and am so well satisfied with it that I would not sell it for three times what I paid for it if I could not get another one like it, for it is one of the finest and best cultivators ever put on the market. In every way, shape or form I wish every one with a garden owned one."

FRANK HUNT, Cross River, N. Y., writes February 25, 1913: "I have had one of your Double Wheel Hoes (hand power) for a number of years, and like it very much. The field cultivator I have, have had for more than twenty years, and I think it is about time I had a new one."

No. 12 Planet Jr. Double Wheel Hoe

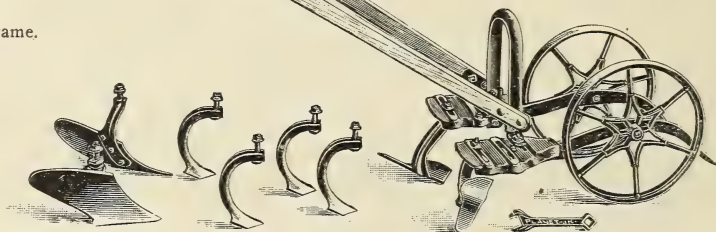
Price, with Attachments
as in cut, \$7.00

Packed weight, 33 lbs.

Equipment:

One pair of 6-inch hoers. } All oil
Four steel cultivator teeth. } tempered.
One pair of plows.
Two leaf lifters.

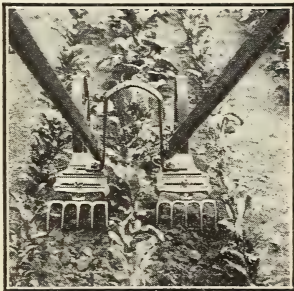
Steel frame.



Double Wheel Hoers—Continued

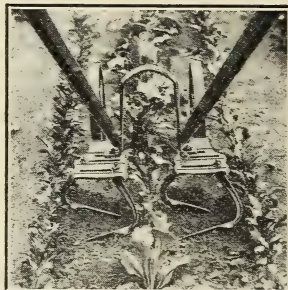
THE HOES are the most valuable of all the wheel-hoe attachments. They are oil tempered and polished. One hoe **is set ahead** of the other to prevent trash from catching between them and tearing out the plants. The curved shield-like front ends protect both the leaves and roots of young plants admirably. The hoers leave the ground almost level. Use the 4½-inch hoers for 6 to 10-inch rows, and the 6-inch for 12-inch rows. For wider work use both pairs of hoers, the narrow ones next to the row. They will then hoe two rows at once, either 8 or 10 inches apart, or one row thoroughly, up to 20 inches. (See cuts.)

THE CULTIVATOR TEETH are of improved design, all steel, and are admirable for deep or shallow cultivation or for marking out.

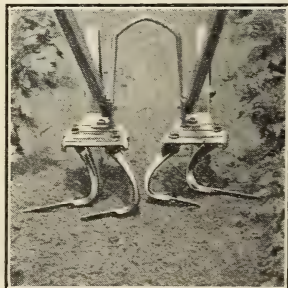


Surface cultivation with rakes. Rows 10 or 12 inches apart.

THE RAKES are a new pattern, especially adapted by careful experiment to first cultivation and also to ordinary uses of a rake. Use two 4-inch rakes to cultivate two rows at once 6 inches apart; 7-inch for two rows 10 inches apart, and for wider, the 10-inch or two rakes on each side. For surface raking use widths as needed.



Hoers set for two rows at once. Rapid business.



Hoers set for extra wide work, from 20 to 24 in.

EDWIN C. BARKER, Station B, Columbus, Ohio, writes January 3, 1914: "I have a Planet Jr. Double Wheel Hoe with all the attachments, and a No. 3 Drill, which I bought five years ago, and think they are the best ever. I seldom use an ordinary hand hoe since I have had your Planet Jr. tools. One would hardly believe the time and labor they save, or the fine work they will do until they have been tried."

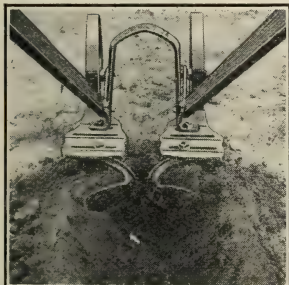
H. S. BLACKMAN, Murfreesboro, Tenn, writes February 12, 1914: "I bought one of your Double Wheel Hoers last year and it is a dandy for garden work. Had never used one before and could not afford to be without one in the future."



Planet Jr. Wheel Hoes in the Royal Nurseries at Schönbrunn, Austria.

Double Wheel Hoes—Continued

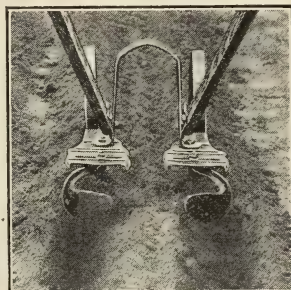
THE PLOWS are invaluable. Use them points together for opening furrows for manure, seed, etc., then exchange sides for covering (see below). Use them also for plowing away from, or toward the crop, both sides at once. It is well to wait a few days between the time of plowing away and returning the earth to the row in order that the buried weeds may die.



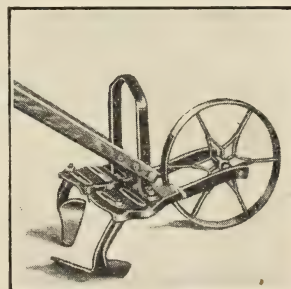
Opening the furrow for seed, fertilizer, etc.

low for ordinary work. **The arch is steel**, with room enough to enable crops to be worked until twenty inches high. The handles, being attached to the arch, are not affected by changes in width of wheels or height of frame, and the frame is left clear of obstruction. **The wheels**, our patent star design, can be set 9 or 11 inches apart for wide rows, 7 inches for narrow rows, or one used as a single-wheel hoe.

FOR WORKING TALL PLANTS, set the tool frames close together, one wheel between the arms, leaf lifters on the outside, and you have in effect a capital single-wheel hoe.



Closing the furrow for covering seeds or fertilizers and for making up rows for plant setting.



As a Single Wheel Hoe

WILLIAM C. DENNIS, Box 5, R. D. No. 1, Hampton, N. J., writes June 20, 1914: "I think this No. 11 is the best make of hoe there is. Everybody ought to have one who has a truck patch or even in a garden. My wife can use it as well as I."

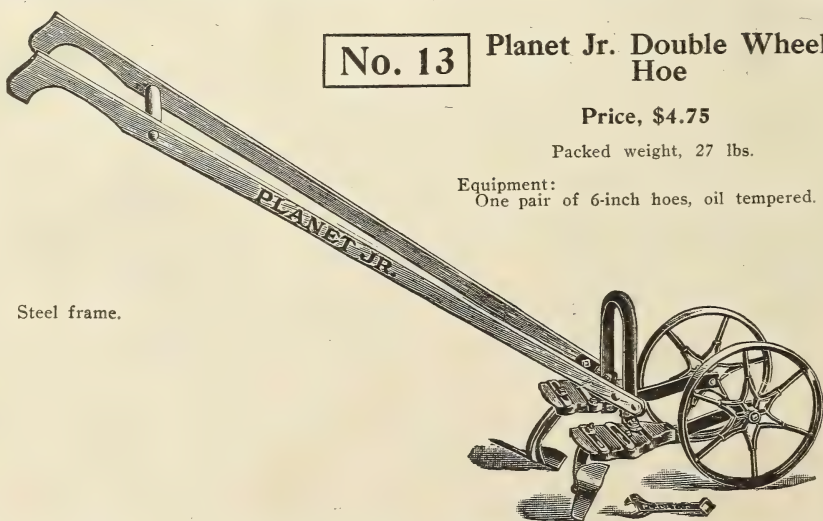
E. W. TOWNSEND, Salisbury, Md., writes March 5, 1912: "I have set up the Planet Jr. Wheel Hoe No. 11 to-day and think it the finest tool on the farm. Will place another order soon. Every man on the farm is highly pleased with the tool. One could hardly have made me believe how easy it is to operate. Why, my 5-year-old boy could push it anywhere. These tools will be the saving of many dollars for me."



Market garden work with Planet Jr. Double Wheel Hoes. Farms of Minch Bros., Bridgeton, N. J.

FINISHING A ROW at one passage with a Planet Jr. Double-Wheel Hoe is the great charm of this tool. It is easier to work the crop closely, when hoeing both sides at the same time. With a little practice the operator finds it easy to follow the row accurately by simply keeping it exactly in the centre between the two wheels. It is well to keep the tools sharp and to work the crop once a week **or after each rain**. One is often surprised to find how complete the destruction of the weeds is, while the crop remains uninjured. This is because seed planted by a good seeder, grows in a straight, narrow line, while the weeds come up irregularly and are almost sure to be on one side or the other of that line, and are easy victims of the deadly wheel hoe.

AS A WHOLE, our No. 11 and No. 12 Double Wheel Hoes are complete in each detail, equipped with the most useful set of attachments and adapted to many kinds of work. We supply a marking attachment (see page 33) as an extra. Price, 80c.



No. 13

Planet Jr. Double Wheel Hoe

Price, \$4.75

Packed weight, 27 lbs.

Equipment:
One pair of 6-inch hoes, oil tempered.

Steel frame.



Thorough and rapid work at Maule's Seed Gardens, Newfield, N. J.

Double Wheel Hoes—Continued

No. 14

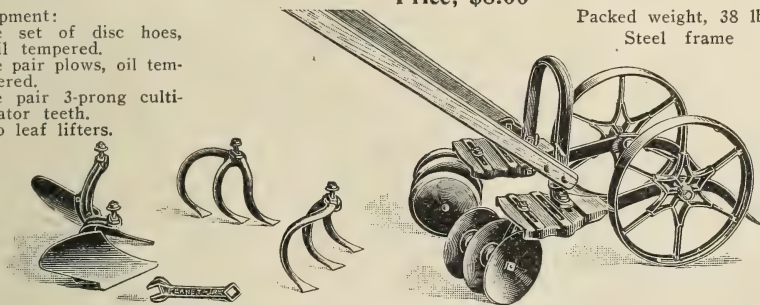
Planet Jr. Double Wheel Disc Hoe, Cultivator and Plow

Price, \$8.00

Equipment:

- One set of disc hoes,
oil tempered.
- One pair plows, oil tem-
pered.
- One pair 3-prong culti-
vator teeth.
- Two leaf lifters.

Packed weight, 38 lbs.
Steel frame



NO. 14. Especially pleasing to all who work peat lands. It has **three adjustable discs** on each side, which may all be used at once or one or two on a side, as preferred. **THE SET OF PRONG CULTIVATOR TEETH** will be found invaluable in general cultivation. The tooth next to the row is narrow and arranged to run shallow, the middle tooth is wider and runs $\frac{1}{2}$ inch deeper, while the outside tooth is still wider and runs another $\frac{1}{2}$ inch deeper, so that the work is finer and shallower next to the row, to avoid injury to the plants, and deeper in the center. The teeth are also set out of line from front to back, which makes them work with greater freedom.

Two acres a day can easily be worked with this implement, and when done it will be better worked than several men could have done it in the same time with hand hoes.

The attachments will fit our other double and single-wheel hoes (except No. 19), and are sold separately if desired. For prices see page 33.

No. 13 $\frac{1}{2}$

Planet Jr. Double Wheel Disc Hoe

Price, \$6.00

Packed weight, 32 lbs.

Equipment: One set of disc hoes, oil tempered. Two leaf lifters.

Same as the No. 14, but has one set of discs and one pair of leaf lifters only.

No. 16

**Planet Jr. Single Wheel Hoe,
Cultivator, Rake and Plow**

Price, \$5.85

Packed weight, 27 lbs.

Equipment:

- | | |
|---------------------------|------------------------|
| One pair of 6-inch hoers. | } All oil
tempered. |
| Three cultivator teeth. | |
| One large garden plow. | |
| One 7-inch rake. | |
| One 4-inch rake. | |
| One leaf guard. | |



SINGLE WHEEL HOES

SINGLE WHEEL HOES are lighter than the double and do almost the same variety of work, but are used mostly **between** the rows. Yet by attaching the wheel to the other side of the arm, Planet Jr. single-wheel hoers can be used to hoe both sides at once while plants are small—the most important time.

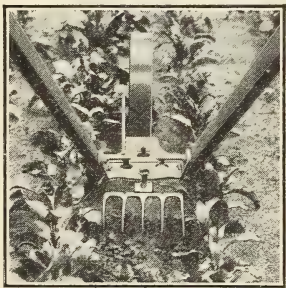
NOS. 16, 17, 17½, 18, 18½, 38, 39 and 39½ wheels and frames are alike, but the tools sold with each vary. Note the description and equipment.

FOR 1915 we offer these single-wheel hoers as the highest type of their class. They have a great variety of tools which adapt the implements to a large variety of work, and there is scarcely any garden culture of which they are not capable.

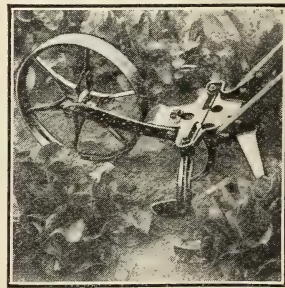
THE FRAME is made of **pressed steel** and is practically indestructible, a great improvement in construction. The wheel arm and leaf guard are also made of steel. **The handles are adjustable in height.**

ALL OUR WHEEL HOE TOOLS are of special pattern, carefully tested by practical men; no others ever offered compare with them. All the steel parts are high carbon steel, oil tempered, finely formed, finished and polished **and work like a charm.**

HOES. The shield hoers are **the most useful of all the tools.** They are oil tempered, finely shaped, neat and narrow, and leave the ground level; are just right for 9-inch rows and up to 12-inch. The hoers are not set opposite to each other, and thus avoid gathering trash between them, **besides adapting them to work different width rows.**



**7-inch Cultivating Rake
in 12-inch rows.**



**Hoes and cultivator tooth
in 12-inch rows.**

MRS. ROBERT GORDON BUTLER, 1230 Spruce Street, Philadelphia, Pa., writes: "I bought one of your garden wheel hoers some three or four years ago, and it has been the joy of my life ever since. If I could afford it, I should buy them by the half-dozen and distribute them among my friends."

PROF. J. E. DUERDEN, Rhodes University College, Grahamstown, South Africa, writes: "I have recently purchased one of your Planet Jr. Single Wheel Hoers, No. 16, and am very much pleased with it in actual operation."



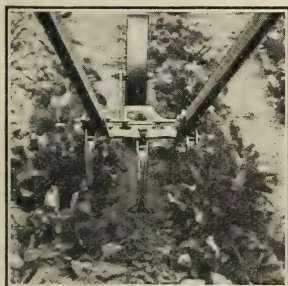
Planet Jr. Single Wheel Hoes in the onion field.

Single Wheel Hoes—Continued

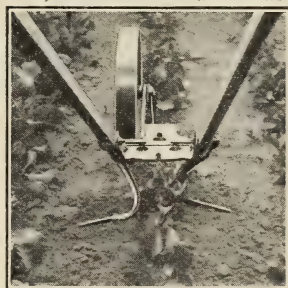
THE PLOW is of superior design, complete with land-side; is large and capable of heavy work and is readily changed for depth. It is generally the first attachment to be used in the spring.

CULTIVATOR TEETH. A set of three of new design, adjustable for pitch, do invaluable service in deep culture. Use a single tooth for **marking out**.

RAKES. Different widths enable the operator to work many different widths of row. When the plants first begin to show, cultivate 6-inch rows with the 3-tooth rake and use the 5-tooth for 9 and 10-inch rows; for wider work use two rakes side by side or overlapping. They are also just the thing for fining and leveling the ground **preparatory** to seed planting, etc.



Cultivating lettuce.



STEEL LEAF GUARD.

This is capital in late work where plants have fallen or been blown over, as peas, strawberries, beets, carrots, etc. It makes easy work close to the crop, where otherwise impossible to work at all, and with **no increase of labor.**

Hoeing both sides at once, with wheel at one side. Very close and rapid.

Mrs. R. M. JOHNSON, Pelham Manor, New York, writes April 9, 1914: "I am very much pleased with my purchase (No. 16 Single-Wheel Hoe) and think it the most useful and easy garden tool I have ever had."

LOUISE KLEIN MILLER, Curator of School Gardens Board of Education, Cleveland, Ohio, writes October 1, 1913: "Your Planet Jr. Cultivators have been used in the school gardens in Cleveland for several years with great success. The children enjoy them and find them an efficient tool. I am pleased to give my word of commendation."

REV. JOHN PROUT, Rensselaerville, N. Y., writes March 20, 1914: "I have a Planet Jr. Single-Wheel Hoe which I have used with satisfaction for over twenty years."



Planet Jr. Wheel Hoes on the Seed Farm and Nurseries of Henry A. Dreer, Riverton, N. J.

Single Wheel Hoes—Continued

NO.17 is identical with No. 16, except in equipment, and all that has been said previously regarding **Planet Jr.** wheel hoes is equally true of No. 17. The three sets of attachments which go with it are all the finest of their kind. An outfit sufficient for most garden work. You can do more and better work with it in one day than you can do in three days with a hand hoe.

THE HOES exchange sides to work to or from the row, and change of wheel regulates the depth. The hoes are constantly useful throughout the season.

THE CULTIVATING TEETH are formed of one piece of steel and work admirably, are changeable for pitch and are useful for marking out rows.

No. 17

Planet Jr. Single Wheel Hoe

Price, \$5.00

Packed weight, 24 lbs.

Equipment:

One pair of 6-inch hoes. } All oil.
Three steel cultivator teeth. } tempered.
One large garden plow.

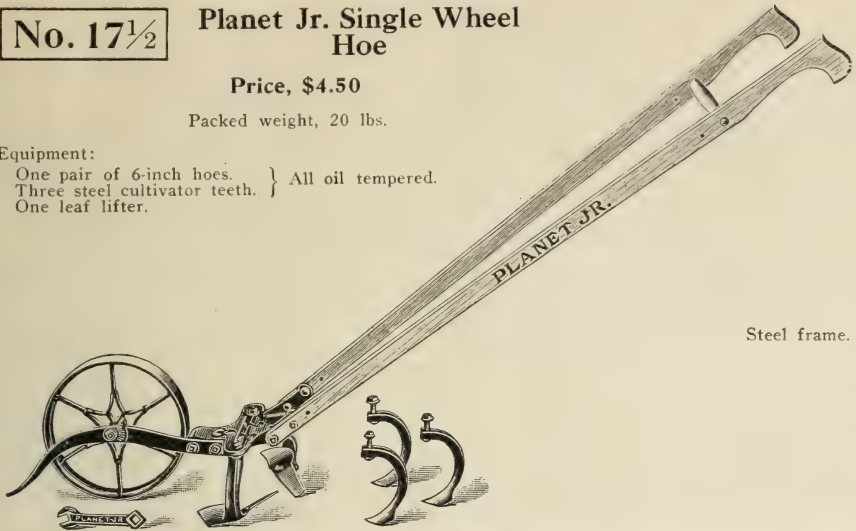


No. 17½**Planet Jr. Single Wheel Hoe****Price, \$4.50**

Packed weight, 20 lbs.

Equipment:

One pair of 6-inch hoers. } All oil tempered.
 Three steel cultivator teeth. }
 One leaf lifter.

**Single Wheel Hoes—Continued**

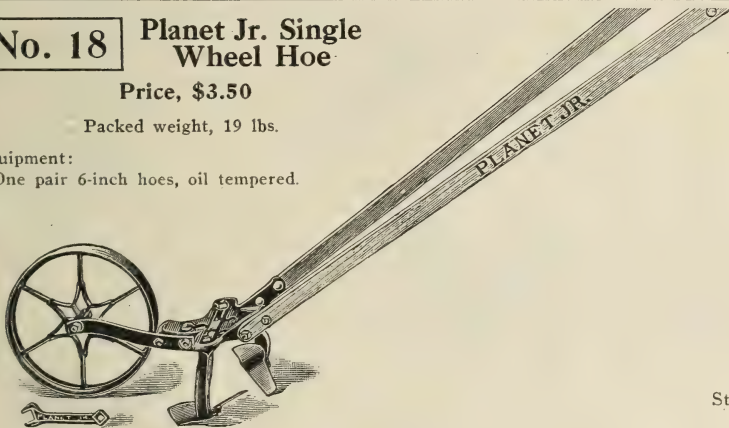
NO. 17½ is a great favorite with people who have a home vegetable garden, and at the same time they are used very extensively by large growers of sugar beets, onions and other market crops who wish to do thorough and rapid work. But we recommend buying the No. 16 or No. 17 machine, as they cost but little more and the extra attachments are exceedingly useful; these may be added at any time, but cost more bought separately. Extra attachments described on later pages will fit this machine.

No. 18**Planet Jr. Single Wheel Hoe****Price, \$3.50**

Packed weight, 19 lbs.

Equipment:

One pair 6-inch hoers, oil tempered.



This has the same frame as our other single-wheel hoes, but is equipped with hoes only; the plow, cultivator teeth or rakes may, any of them, be added to the equipment, although it is better and cheaper to select and secure what you need with the original purchase.

O. B. STRONG, Tilburg, Ont., writes June 11, 1913: "I have tried different wheel hoes and there are none that can do the work that the Planet Jr. Single-Wheel Hoe does. My father and I each have a Planet Jr. Single-Wheel Hoe. There are other makes, but once they handle the Planet Jr. they drop other kinds and come and borrow ours."

Packed weight, 29 lbs.

Equipment:

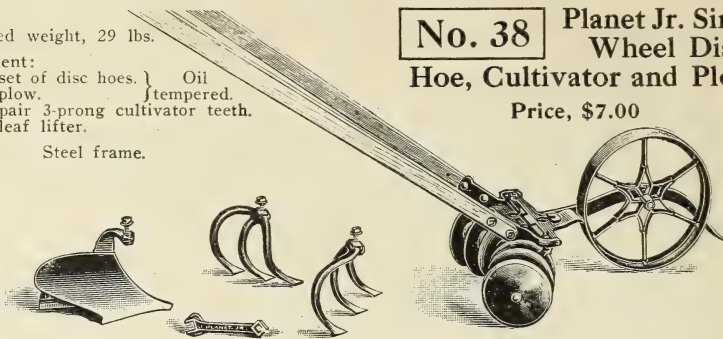
One set of disc hoes. } Oil
One plow. } tempered.
One pair 3-prong cultivator teeth.
One leaf lifter.

Steel frame.

No. 38

Planet Jr. Single
Wheel Disc
Hoe, Cultivator and Plow

Price, \$7.00



NO. 38. This new tool is a combination occupying the same position among single-wheel hoes as that taken by the No. 14 Planet Jr. Double-Wheel Disc Hoe (on page 25) among Doubles. The sets of discs and cultivator teeth are the same as furnished with No. 14 Disc Hoe, and the plow is identical with that furnished with our single-wheel hoe. This combination we feel satisfied will give the best satisfaction possible. It is especially adapted to peat lands. The description of the attachments is given under No. 14 Double-Wheel Disc Hoe.

No. 18½ Planet Jr. Single Wheel Disc Hoe

Price, \$4.75

Packed weight, 25 lbs.

Equipment: One set of disc hoes, oil tempered, one leaf lifter.

Steel frame.

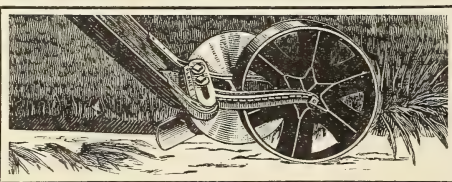
This simple tool is identical with No. 18 Single-Wheel Hoe (page 29), except that discs and a leaf lifter take the place of the hoes. The discs are adjustable for depth and throw, as described under No. 14 Double-Wheel Disc Hoe.

PLANET JR. GRASS EDGER

Price, \$6.25

Packed weight, 26 lbs.

EXTREME NEATNESS is the great secret of attractiveness in grounds surrounding a house. The Planet Jr. Grass Edger assists wonderfully in producing this effect.



It will edge either straight or curved work, paths, drives, open borders or flower beds, doing the work well and rapidly.

CEMENT WALKS. Thousands of miles of cement walks are still edged slowly, laboriously and poorly, with a spade or sod cutter. With the Planet Jr. Edger you can edge them symmetrically with charming effect, at the speed of a walk. The Planet Jr. Edger cuts out a "V" shaped piece of sod, leaving a uniform finish to the sidewalk, the last word in neatness and beauty. By means of a simple adjustment the tool may be used either for cement or gravel walks and drives, or for flower beds.

STRAWBERRY GROWERS find the grass edger disc attachment a rapid and excellent tool for cutting off surplus runners. Goes on all hand tools. Price, \$1.00.

H. A. WATT, Woodlawn, Pa., writes February 16, 1914: "If I could not have a Planet Jr. I would not have a garden, but I think you should tell what can be done with your machines, as I find you do not tell half the good points."

SR. JULIO NOVAES, Goyanna, Pernambuco, Brazil, writes July 20, 1914: "For a long time I have used your Planet Jr. implements, and am fully satisfied with them."



Planet Jr. Single Wheel Hoe in the family garden.

No. 39

**Planet Jr. Single Wheel Hoe,
Cultivator and Plow**

Price, \$5.75

Equipment:

One pair peat land ho. } All oil
One large garden plow. } tempered.
One pair of 3-prong teeth.
One leaf lifter.



Packed weight, 27 lbs
Steel frame.

The No. 39 Planet Jr. is especially adapted to onion growers' and gardeners' use in peat lands. Practical trials in such soils for years past enable us to recommend these special oil-tempered ho. fully.

THE HOES, for close hoeing and weed killing, leaving the ground level.

THE PRONG TEETH, for fine deeper work.

THE PLOW, for drawing furrows, for covering and for deep and thorough cultivation for large vegetables in the garden, such as potatoes, corn, etc.

No. 39^{1/2}

Single Wheel Hoe

Price, \$3.85

Equipment: One pair of peat land ho., oil tempered. Packed weight, 19 lbs.

This tool is identical with No. 39, except that it has one pair of peat land ho. only. Other attachments can be added as needed.

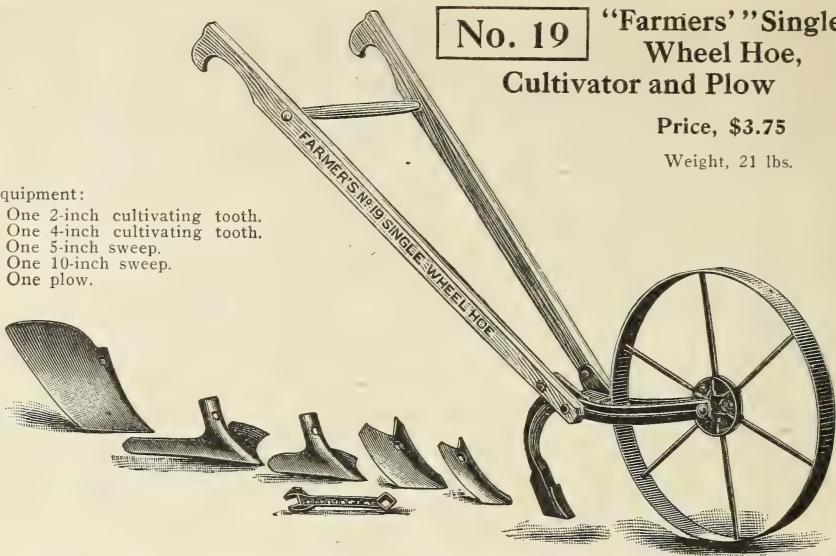
No. 19 "Farmers'" Single Wheel Hoe, Cultivator and Plow

Price, \$3.75

Weight, 21 lbs.

Equipment:

- One 2-inch cultivating tooth.
- One 4-inch cultivating tooth.
- One 5-inch sweep.
- One 10-inch sweep.
- One plow.



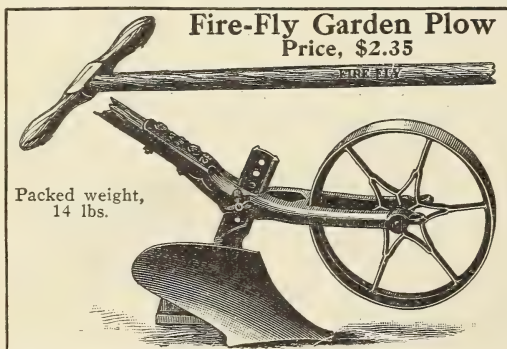
Single Wheel Hoes—Continued

NO. 19. This attractive implement is especially designed for the farmer's garden work, though it offers to every one with either field or garden a cheap and effective tool for wheel-hoe operations.

THE HIGH WHEEL is liked by many; the standard is slotted for depth regulation and an adjustable malleable piece carries all the steels that go with the machine.

THE CULTIVATING BLADES do deep work and mark out rows for onion sets, plants, etc. **The Sweeps** are fine for level work, the 5-inch for 8-inch rows; the 10-inch for 12-inch rows. For wide rows go twice to the row as needed.

THE PLOW marks out furrows, covers them, and plows to or from different crops. The great variety and fine shape and quality of the tools makes the implement valuable for many kinds of work. It is strong, well made, and quickly adjusted. The height of the handle can be changed to suit man or woman, boy or girl.



Fire-Fly Garden Plow
Price, \$2.35

Packed weight,
14 lbs.

THIS TOOL IS EXCEEDINGLY USEFUL to owners of small gardens. **It will throw** a furrow four to six inches wide and one to three inches deep, and deeper by going a second time in each furrow. It makes fine furrows for manure or seeds and covers them, and makes up rows for all kinds of plant setting. **In cultivating**, plow away, weed the row and plow back again; nothing more thorough than this. After the furrow is thrown away from the crop lightly, leave it a few days before throwing back. This tool will enable a busy man

to do in his spare minutes nearly all the work of a family garden.

CHICKEN RAISERS find it of great advantage in **plowing up their scratching yards.**

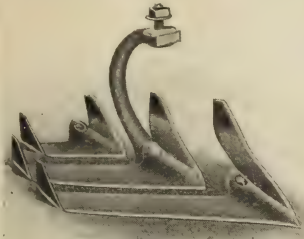
JOHN W. HOLTERMAN, Box 32, Espanola, New Mexico, writes March 6, 1912: "Your Planet Jr. garden plow is one of the greatest inventions of its kind. Bought one last spring and can now keep my garden clean, which I could not do before. No up-to-date gardener can be without a Planet Jr. No other plow like the Planet Jr."

J. D. WILLIAMS, Centerville, N. Y., writes May 22, 1914: "Planet Jr. tool is a great help in the garden."

33 EXTRAS FOR PLANET JR. HAND MACHINES

Planet Jr.

Planet Jr. Seed Drills and Wheel Hoes have been in successful use for so many years that we get many calls for wearing parts. We give below prices of the principal extras, and if anything else is wanted send for special repair circular, naming the machine for which the repair is needed. We also make the following special attachments:



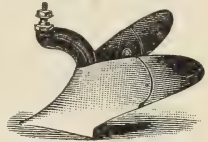
SPECIAL PLANET JR. HAND TOOL SWEEPS.

Price, set of three, for Single-Wheel Hoe, 4 in., 8 in., 10 in., \$1.30. Set of four, for Double-Wheel Hoe, two 4 in. and two 8 in., price, \$1.70.

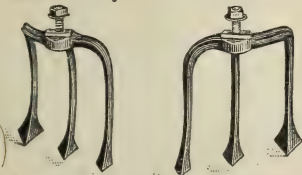
These are first shown for 1915. They are made of thin steel, are very flat and narrow and do satisfying level work; made particularly effective by keeping sharp, which is easily done.

THE DOUBLE MOLDBOARD PLOW fits our single-wheel hoes and No. 1, No. 4, No. 6 and No. 28 Seeders. It can be set to furrow narrow or wide, or to

hill much or little. Width at widest, 14 inches; narrowest, 10 inches. The movable wings when turned straight up leave a deep, narrow furrow; when used as shown in cut a much wider furrow. When wings are turned down, the tool is excellent for hilling and ridging. Price, \$1.25. With connecting bar, fitting all our double-wheel hoes and No. 25 Seeder, price, \$1.70.



PEAT LAND HOES. We have been making these for some of our peat land customers, and they have given such entire satisfaction that we catalogue them. They have a wider and higher shield than our regular hoes and cut six inches wide each. They are much liked by onion growers everywhere. Price, per pair, \$1.40.



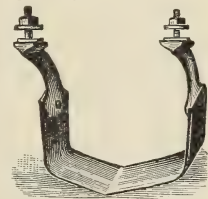
DISC HOES. These are described on page 25, and also do good work. Price, \$2.25 per set.

THREE-PRONG CULTIVATOR TEETH. These new teeth work admirably for deep stirring of the ground without much hilling. The tooth next the row is small and rather short; the middle tooth is longer, broader and set behind the first, while the third tooth is still longer and broader, thus working deeper and more

thoroughly toward the middle of the row. Price, \$1.30 per pair.

THE ONION HARVESTER is a useful attachment for our combined drills and all our wheel hoes. Eight-inch size for onions, and onion sets. It leaves the crop in the best condition for easy handling. It is used also for cutting spinach. Price, \$1.00; 6-inch size, 85 cents.

PATH CLEANERS. We furnish a 12-inch size which does admirable work in parks, cemeteries, etc. Price, \$1.20.



MALLEABLE RAKES. Three, five and seven teeth, for leveling and preparing ground for planting and for first cultivation of crops. The three-tooth works 6-inch rows, the five-tooth 10-inch rows, and for wider rows use a seven-tooth, or the three and five-tooth set to suit. For prices, see below.

MARKING ATTACHMENT. This fits all Planet Jr. wheel hoes and is similar to our seed drill markers. It makes a plain line, marking distances from 6 to 20 inches, and is easily changed from side to side from between the handles. Price, 80 cents.



EXTRA NARROW CULTIVATOR TEETH. (No. 2775.)

These work particularly well in hard soils, leaving the ground in fine condition. Sold in sets of three. Price, \$1.05; in sets of four, price, \$1.40.

4 1/2-inch Hoes, Complete, C & D1.....	pair, \$0.80
6-inch Hoes, Complete, C & D1.....	pair, .90
7-inch Hoes, Complete, C & D1.....	pair, 1.00
8-inch Hoes, Complete, C & D1.....	pair, 1.10
4 1/2-inch Hoe Steels, C & D1, No. 552/3,	
pair	.40
6-inch Hoe Steels, C & D1, No. 1092/3,	
pair	.50
7-inch Hoe Steels, C & D1, No. 1700/1,	
pair	.60
8-inch Hoe Steels, C & D1, No. 997/8,	
pair	.70
Rakes, Three-Tooth	pair, .70
Rakes, Five-Tooth	pair, .90

Rakes, Seven-Tooth	per pair, \$1.10
Steel Cultivator Teeth and Bolt, Regular	
or Narrow	each, .35
Plows for Double-Wheel Hoes.....	per pair, 1.10
Plow Steels for ".....	per pair, .60
Plow Steels for Single-Wheel Hoes.....	each, .60
Plows for Single-Wheel Hoes.....	each, 1.10
Onion Set Plow and Coverers.....	each, 1.00
Peat Land Plow.....	each, .55
Handles	per pair, .70
Sweeps for Hand Tools, 4-inch.....	each, .25
Sweeps for Hand Tools, 8-inch.....	each, .35
Sweeps for Hand Tools, 10-inch.....	each, .45
Standard and Bolt.....	each, .25



Planet Jr. No. 8 Horse Hoes in the vineyard.

ONE-HORSE IMPLEMENTS

Planet Jr. Horse Hoes are more widely known and bear a higher reputation than any horse hoes ever made. Their first appearance was hailed with delight by practical and thrifty farmers, and they have been held in increasing esteem ever since by those who have learned their strength and various merits by practical use.

In the following pages practical men will detect the impress of the practical mind. The various tools are the result of a thorough knowledge of both farming and manufacturing, and very naturally they have attracted the attention of brother farmers throughout the world. We ask you to study this part of the catalogue and to write us fully when in doubt what to use.

An important improvement is the substitution on all our one-horse tools of our new steel wheel for the old-style cast wheel. This steel wheel having no spokes will not clog with cornstalks, stones or other trash, and no sand or dirt can be carried up on the inside of the rim to drop on the bearings. It is the same diameter as the cast wheel, but with longer bearing. The hub is cheaply renewed, though it outwears the cast wheel far away.

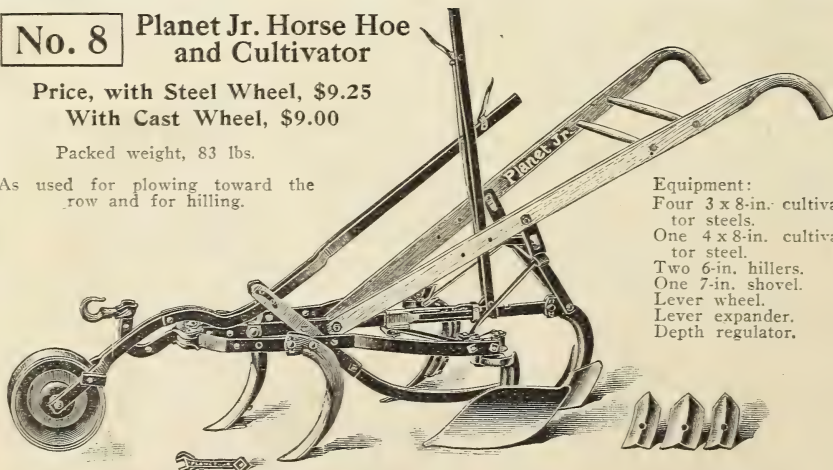
No. 8 Planet Jr. Horse Hoe and Cultivator

Price, with Steel Wheel, \$9.25

With Cast Wheel, \$9.00

Packed weight, 83 lbs.

As used for plowing toward the row and for hilling.



Equipment:

- Four 3 x 8-in. cultivator steels.
- One 4 x 8-in. cultivator steel.
- Two 6-in. hillers.
- One 7-in. shovel.
- Lever wheel.
- Lever expander.
- Depth regulator.



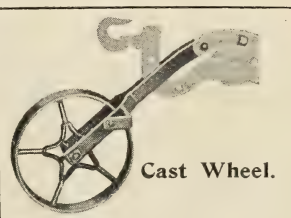
Cultivating potatoes in New Jersey with the Planet Jr. No. 8 Horse Hoe.



Steel Wheel.

These steel wheels fit all Planet Jr. Horse Hoes or Harrows, but when ordering extra wheels, state for which machine they are wanted, as **the arms vary.**

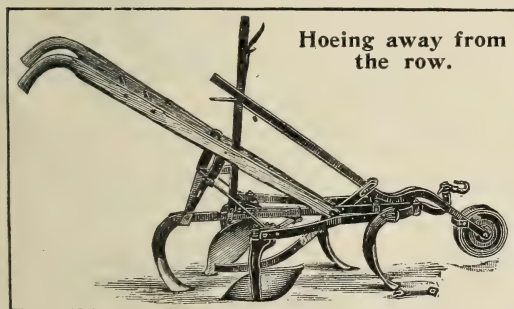
Planet Jr. Horse Hoes and Harrows are still supplied with the cast wheels when spe-



Cast Wheel.

cially ordered, and the price is 25 cents less than for machines equipped with steel wheel.

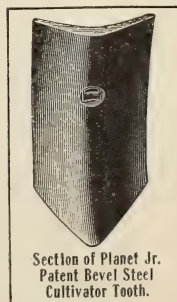
NO. 8 PLANET JR. HORSE HOE AND CULTIVATOR. This is a general favorite. The tool is especially strong, easily handled and is braced so as to make a stiff, unyielding tool intended for long service. The Planet Jr. Horse Hoes, in their various styles, are of almost universal use where one-horse implements are needed.



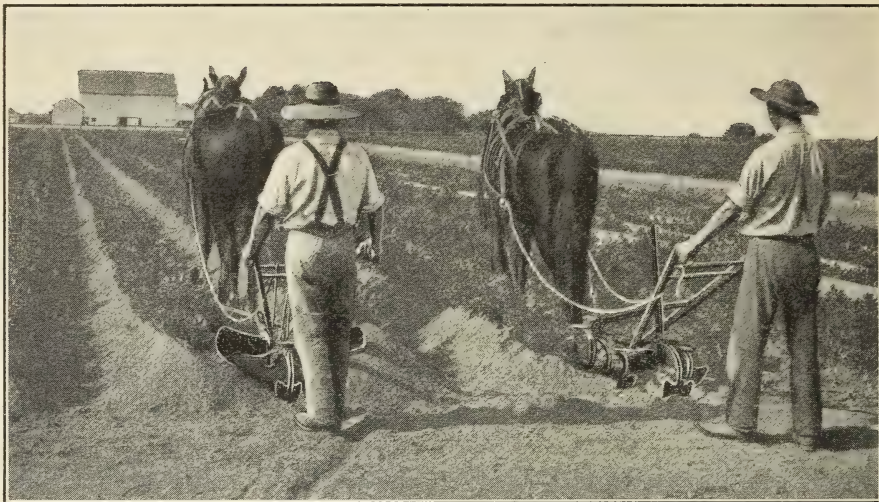
Hoeing away from the row.

THE PATENT FRAME of stiff steel is extra long and one or two inches higher than usual, and, being our patented design, the standards are interchangeable. Planet Jr. Horse Hoes and Cultivators close to 10 inches and open to 25 inches. The expander combines strength and stiffness with simplicity. The play of the ordinary lever

expander is largely avoided and the change in width is easy and almost instantaneous. The patent standards are hollow steel, of the strongest pattern, mutually stiffening the frame and being stiffened by it. They are round in the throat, they polish in use and can scarcely be clogged; are also extra high and the rear tooth has extra clearance—preventing clogging and making good work. The cultivating steels are made of beveled steel. They are thickest in the center (see cut), so they are self-sharpening, as the point retains its shape and strength, thus greatly prolonging the life of the steel. Every steel has Planet Jr. on the back.



Section of Planet Jr. Patent Bevel Steel Cultivator Tooth.



Hilling celery without handling—using Planet Jr. Horse Hoe and Double Celery Hiller.

THE PATENT SIDE STANDARDS take either cultivator steels or hoes.

THE PATENT HILLERS OR PLOWS are reversible, are used either pointed or rounded edge foremost. They work well as plows, and throw both to and from the row and reversed are invaluable for hoeing. The slanting rounded edge may be run so close to the plants as almost to touch them, without danger to the roots. Reversed, as in cut on page 35, they cut away from the row just like a disc.

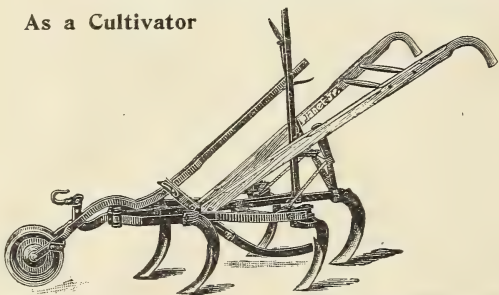
THE WHEEL LEVER is of fine design and the **patent depth regulator** is an important feature; the tool runs more steadily, and the depth can be changed instantly.

THE PATENT PRESSED STEEL HOOK always stands erect, the strongest and best made.

THE PATENT HANDLE BRACES are of special design and rigid, yet do not interfere with opening and closing or with the side adjustment of the handles.

THE PATENT HANDLE ADJUSTMENT is complete. Up or down for height, and a very

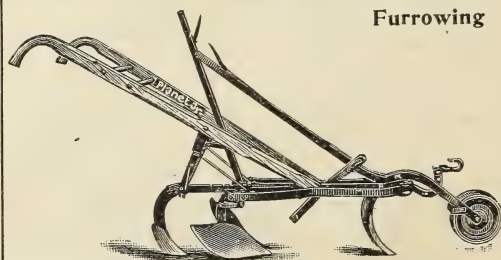
As a Cultivator

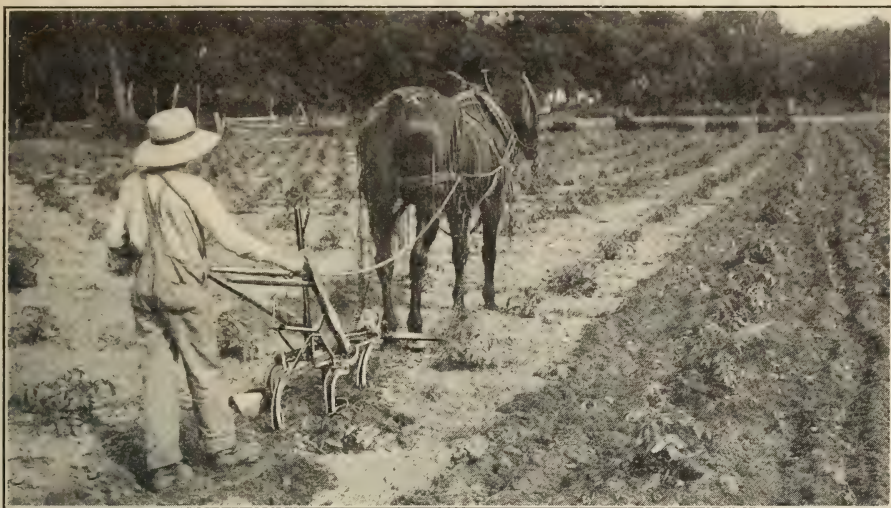


important side adjustment. It holds the handles either central or to one side. Thus, in covering, the operator need not walk on the finished work, and in vineyards and among raspberries, blackberries, etc., he may work close to the row without inconvenience.

EVERY OWNER of a Planet Jr. Horse Hoe will find that it is invaluable in cultivating almost every known crop grown in rows.

Furrowing





Tomato cultivation with the Planet Jr. No. 7 Horse Hoe.

THE cut below shows the most common and useful of the various forms in which Planet Jr. horse hoes may be set up. The small cut (page 35) shows the side hoes reversed, when the tool can be used for **hoeing** a crop closely, saving an immense amount of hand work. The hoes cut the surface weeds away close to the row, yet do not endanger the roots of the crop, and the rear tooth **returns the earth toward the row**. The hoe steels and sweeps shown with the No. 8 machine, as well as the various furrowers and ridgers shown on pages 69 and 70, will all fit No. 8 and all our other horse hoes.

The No. 7 Horse Hoe is the No. 8 without the depth regulator. It works the same as No. 8 in every way except that it lacks the steadiness and easy control of depth made possible by the depth regulator.

No. 7 **Planet Jr. Horse Hoe**

Price, as in cut, \$8.75

With Cast Wheel, \$8.50

Packed weight, 77 lbs.

Equipment:
 Four 3 x 8-in. cult. steels.
 One 4 x 8-in. cult. steel.
 One pair 6-inch hillers.
 One 7-in. shovel.
 Lever expander.
 Lever wheel.

ELMER J. MYERS, Rural Route No. 1, Leechburg, Pa., writes May 25, 1914: "I have one of your horse hoes which I purchased some five or six years ago, and will say that it is the best one-horse machine in the neighborhood."

No. 9**Planet Jr. Horse Hoe**

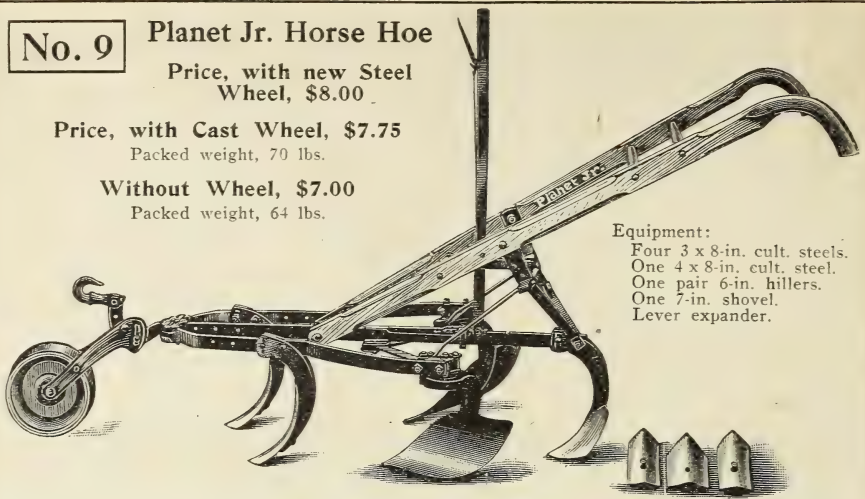
Price, with new Steel
Wheel, \$8.00

Price, with Cast Wheel, \$7.75

Packed weight, 70 lbs.

Without Wheel, \$7.00

Packed weight, 64 lbs.

**Equipment:**

Four 3 x 8-in. cult. steels.
One 4 x 8-in. cult. steel.
One pair 6-in. hillers.
One 7-in. shovel.
Lever expander.

THIS ADMIRABLE TOOL is identical with No. 7, except that it has a plain wheel instead of the lever wheel. It has the high frame, patented hollow steel standards, new steel wheel, lever expander and hollow steel wheel arms.

This tool has become popular because of its strength, lightness, easy change of width, and perfection of work, and while not so handy as a tool with a lever wheel, it is a favorite.

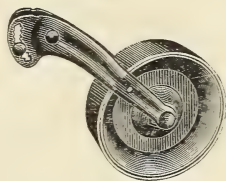
The handles are adjustable in height and also sidewise, and the equipment as shown in the cut offers a tool which will always be useful.

No other cultivating machine is so widely known as the Planet Jr. Combined Horse Hoe and Cultivator; it is in use throughout the civilized world. It is so strongly built as to withstand incredible strain, yet it is light and easy to handle. It opens and closes furrows, hoes right up to the plants without danger of injury, throws earth to or from the row and is an excellent hiller. One can cultivate to any reasonable depth desired, and adjust for any width from 10 to 25 inches. Every part is perfected to make the tool acceptable to the intelligent farmer who knows the best is the cheapest in the long run.

THE NEW STEEL WHEEL, having no spokes, will not clog with corn stalks, stones or other trash, and little or no sand or dirt can be carried up on the inside of the rim to drop on the bearings.

The wheel is the same diameter as our cast-iron wheel, and the bearing on the axle bolt is longer. The hub is cast iron and is easily renewable at small expense. The tire is forced on and electrically welded.

This new steel wheel can be attached to any Planet Jr. horse hoes, harrows or plain cultivators, but when ordering, state for which machine it is wanted.



All Steel Wheels for Planet Jr.
Horse Hoes, Harrows and
One-Horse Cultivators

J. M. FARRIS, Gray, Ky., writes April 14, 1912: "I have one of your Horse Hoes and Cultivators. I have used this machine for eight or ten years and would not try to farm without one."

GEORGE W. AIKEN, Grand Haven, Mich., writes February 26, 1913: "You seem like an old friend, as I have had one of your Seed Drills and Horse Hoes for nearly thirty-five years and they are good for thirty-five years more, or perhaps we might say they are indestructible."

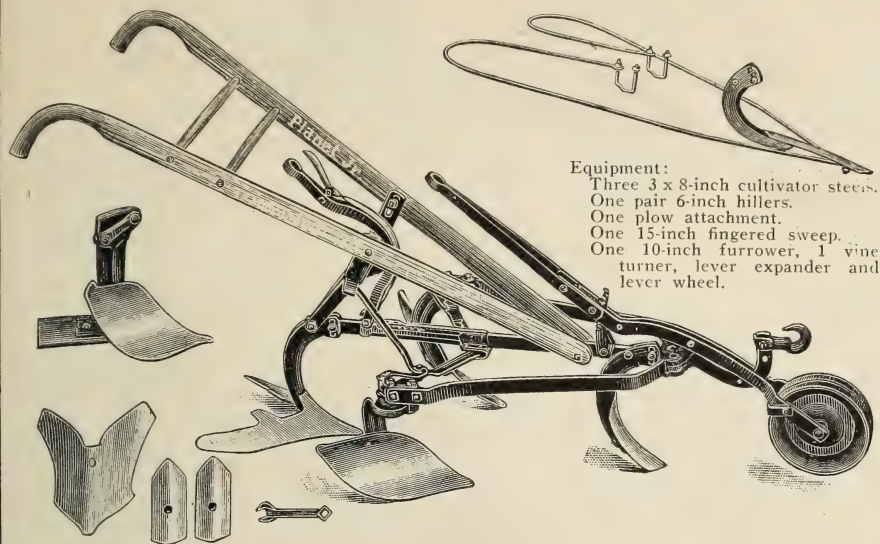
R. S. SHAW, Dean and Director, Experiment Station, Michigan Agricultural College, East Lansing, Mich., writes January 26, 1914: "This institution has always used your goods to a large extent and is continuing to use them."

T. S. COLLINS, Blairsville, Ga., writes May 26, 1913: "Have been using your Planet Jr. Horse Hoe fifteen years. Excellent satisfaction."

PERCY LUMLEY, R. F. D. No. 5, Greenwood, S. C., writes April 15, 1912: "Have six of your horse hoes and consider them the best cultivator made."

No. 10

The Great New Planet Jr. Combination Farm and Garden Horse Hoe, Cultivator, Furrower, Plow and Vine Turner



Equipment:

Three 3 x 8-inch cultivator steels.
One pair 6-inch hillers.
One plow attachment.
One 15-inch fingered sweep.
One 10-inch furrower, 1 vine turner, lever expander and lever wheel.

Price, complete, as in cut, \$13.00

Packed weight, 112 lbs.

Less vine turner, \$11.75

Packed weight, 99 lbs.

Less vine turner and plow, \$8.00

Packed weight, 72 lbs.

With cultivator teeth, sweep and wheel, only, \$6.75

Packed weight, 63 lbs.

With cultivator teeth and sweep, without wheel, \$5.25

Packed weight, 54 lbs.

THIS NEW COMBINATION Planet Jr. tool is the latest and best of all Planet Jr. products of its class. It is the result of fifty years of close acquaintance with gardening and farming, and almost forty years of Planet Jr. manufacturing. This wide, double experience guarantees not only that the construction and combinations are the very best known to the manufacturer, but also that this tool with the variety of work that it will perform, is just what will save the most labor to the farmer.

THE NEW NO. 10 is slightly smaller and lighter than our No. 8, yet it is stronger and does a greater variety and better quality of work. **It runs steadily** and the teeth are farther apart, front to back, and narrower when open, than our regular tools.

THE MIDDLE BAR, longer in front, makes for steadiness and accurate working of crops.

THE STANDARDS as designed for this tool are the strongest we have ever made.

THE EXPANDING LEVER AND BRACES and the **wheel lever** are all more compact and stronger, more convenient and quickly adjusted than any we have before invented.

THESE LEVERS are also in more pleasant positions than upon our regular horse hoes, and both levers are free from the wire attachment to the ratchet pins.

THE WHEEL LEVER has neither wire nor hand piece lever, yet can be changed in a second.

THE EXPANDER LEVER, in design and position, we have never seen equaled anywhere. Convenient and powerful, the wire replaced by a strong **steel band**, the

changes in width always necessary as the distance between the rows varies, are made with the greatest ease and celerity; this enables the operator to do most perfect work between all rows from $3\frac{1}{2}$ feet down.

THE STEEL WHEEL is unbreakable and so designed as not to pick up stones, roots, stubs, etc.

THE SIDE HOE STANDARDS are the strongest we have ever put out.

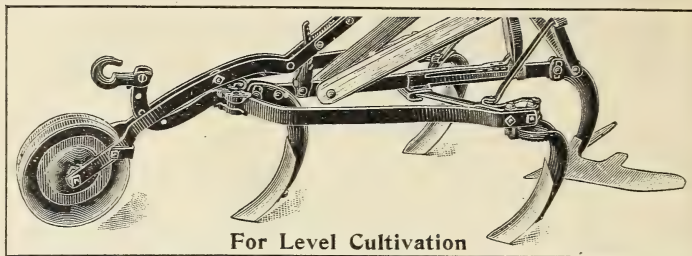
THE SPACING OF TEETH is the best for free work and prevention of clogging.

THE FINGERED SWEEP is a thorough weed killer, and leaves the ground nearly level. Replaced by the furrower, the tool becomes a fine ridger.

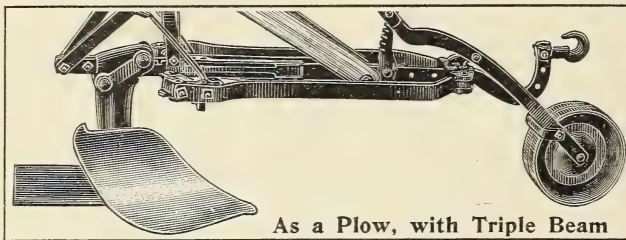
THE FURROWING AND HILLING TOOTH combined with the side hoes will draw amply large furrows for manure, seeds, etc., while by removing the furrower and front tooth and exchanging sides with the hoes, covering can be done admirably at one passage.

ADJUSTMENTS for the handles to one side and varying height are complete.

THE SMALL REVERSIBLE STEEL PLOW is a new attachment for horse hoes, but works neatly and runs easily, cutting a furrow three to four inches deep and seven to ten wide.



For Level Cultivation



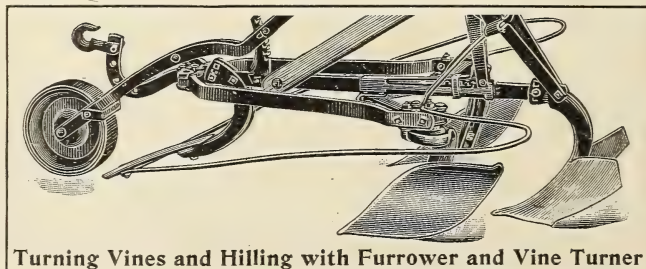
As a Plow, with Triple Beam

THE PATENTS on these strong points of construction prevent imitators and pirates generally from profiting by the genius and brains of the observant and experienced manufacturer.

The cut on page 39 shows this new tool with its various attachments, and shows it set up, perhaps in its most useful form, in which it is specially adapted to cultivating and hilling slightly all crops in rows from $2\frac{1}{2}$ to $3\frac{1}{2}$ feet apart.

As a plow, the above cut shows a new attachment, making the tool of greatly increased value in large gardens, market-gardens and small acreage farms or ranches. It plows from three to four inches deep by from seven to ten inches wide. Can be used for furrowing, covering, hilling, etc. The moldboard is steel and is reversible, giving double wear.

The vine turner is specially adapted to laying-by sweet and white potatoes, tomatoes, etc., when not over $3\frac{1}{2}$ feet apart. Also useful for first hilling of celery and for early tending of vine crops, such as melons, cucumbers, strawberries, etc., before the vines get over two feet long.



Turning Vines and Hilling with Furrower and Vine Turner

Closed up tight, the tool is excellent for making furrows for manures and fertilizers, and for potatoes, beans, peas, etc. Then exchange the hoes, leave off the furrower, and cover; or draw ridges ready for setting out plants, etc.

The handy levers make quick adjustment for width and depth, making easy cultivation where one horse is sufficient.

No. 4 Planet Jr. Horse Hoe

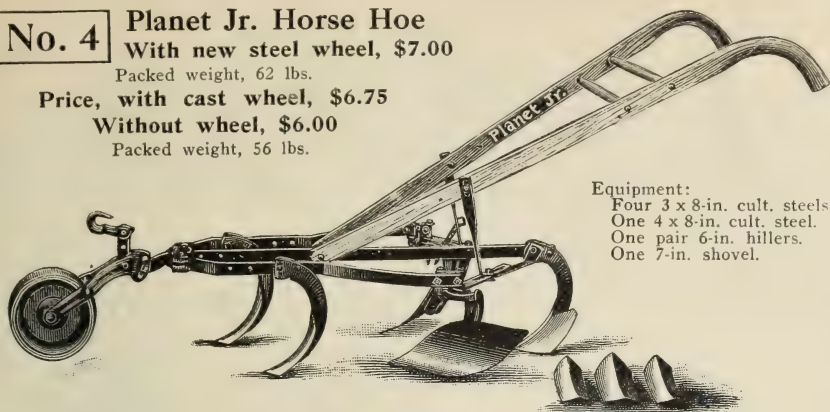
With new steel wheel, \$7.00

Packed weight, 62 lbs.

Price, with cast wheel, \$6.75

Without wheel, \$6.00

Packed weight, 56 lbs.



Equipment:

- Four 3 x 8-in. cult. steels.
- One 4 x 8-in. cult. steel.
- One pair 6-in. hillers.
- One 7-in. shovel.

THIS TOOL is low in price, strong and simple; it has our latest patent handle braces; firm, simple, strong, convenient. With these the frame and handles seem almost like one solid piece. Changes in width are quickly and easily made by the patent expanders, and one side may be opened wide, with the other closed. This tool will carry also a variety of our extras shown on pages 69, 70 and 71. The sweeps, the narrow points, the furrowers and the vine turners are specially useful. Every feature is carefully designed and the tool will give complete satisfaction.

As an example, the cultivator plates are **full length**, and are made of our special beveled steel; double thick down the center and tapered thin to the edges, making a strong tooth, one that keeps the shape of the point and cutting edges and outlasts any other style.

No. 80

Planet Jr. Horse Hoe and Cultivator

Price, with new steel wheel, \$9.25. Price, with cast wheel, \$9.00

Packed weight, 77 lbs.

Without wheel, \$8.25

Packed weight, 70 lbs.

Equipment: Four 3 x 8-in. cultivator steels; one 4 x 8-in. cultivator steel; one pair 6-in. hillers; one 8-in. shovel.

OUR NO. 80 HORSE HOE AND CULTIVATOR has a longer frame and is heavier and stronger than our other styles, though built on the same lines as our No. 4 Horse Hoe. It opens to 26 inches and is adapted to complete cultivation of crops in rows up to 3½ feet apart at one passage; by giving a round to a row the tool works beautifully all width rows up to 4 feet apart. We especially recommend it for foreign countries or where the ground is rough and extra strength is desirable.

JOS. YOUNGER, Box 121, Port Washington, L. I., N. Y., writes June 12, 1913: "I received your cultivator O. K. It is just the thing. Nothing finer on the market. I have certainly put a hole in my garden. Never again will I do without one. I have just started off a few neighbors of mine. They say we have to have one."

G. D. MCKISSON, Proprietor Fairmont Nurseries, Fairmont, Minn., writes August 31, 1914: "We use your tools and also the horse tools in our nursery almost exclusively."

THOMAS M. FITZGERALD, Beaver, Pa., writes July 16, 1912: "I have been using some of them (Planet Jr.) for twenty years and would not be without them."

BEN LEATH, Route No. 2, Kensington, Ga., writes April 28, 1913: "I have two of your No. 4 Planet Jr. (one horse). I am well pleased with them and I would not farm without one. I used one of them to cultivate my corn. It is the trick for corn. It knocks all the hoeing out. I raised five prize acres in 1912 and done the most of the work with your Planet Jr."

"In 1911 I only had one prize acre and I made a yield of 214 bu. 40 lbs. per acre.

"I worked my corn six times with your No. 4 Planet Jr. Cultivator."



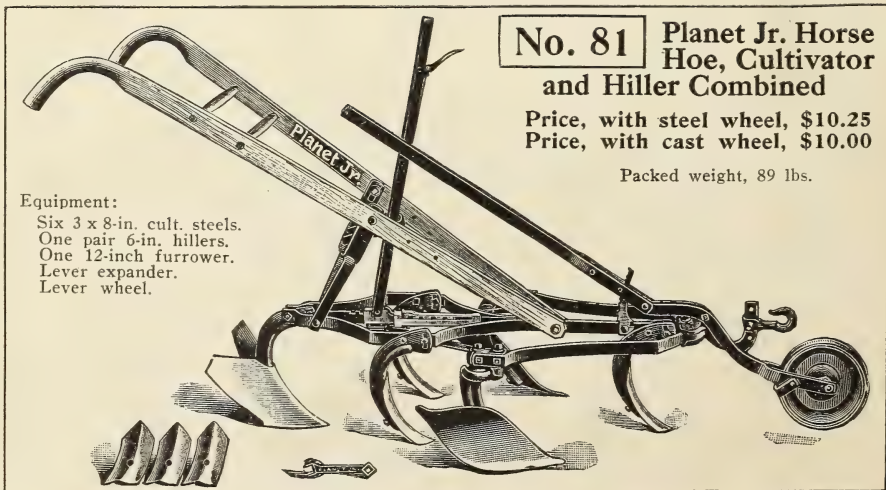
Burpee's Seed Farm, Doylestown, Pa. Cultivating dahlias with No. 8 Horse Hoe.

NO. 81 is an extra rigid, admirable tool for all widths of cultivation and for hilling crops up to four feet apart. It is very compact and strong, and is sure to give satisfaction. It runs steadily, is the best braced of all our one-horse tools, and leaves the crop just as you want it. It is an admirable furrower and hiller.

It has a cultivator tooth central in front, which increases the steadiness of the tool. This is followed by a group of teeth, of which the pair that work next to the plants are furthest forward and are adjustable for width by the lever expander. Intermediate between these and the rear tooth is a pair of teeth 13 inches apart.

The arrangement of the teeth makes it work well as a hiller, and for **thoroughness** is a distinct advance over the older tools. For level work the earth may be thrown away from the row and thrown back again by the rear teeth.

THE EXTRA WIDTH OF CUT and the extra firmness of frame make this tool a useful one and an increasing favorite.



Equipment:

- Six 3 x 8-in. cult. steels.
- One pair 6-in. hillers.
- One 12-inch furrower.
- Lever expander.
- Lever wheel.

No. 9 Planet Jr. Plain Cultivator

Price, with new steel wheel, \$6.75

With cast wheel, \$6.50

Weight, 63 lbs.

Without wheel, \$5.75

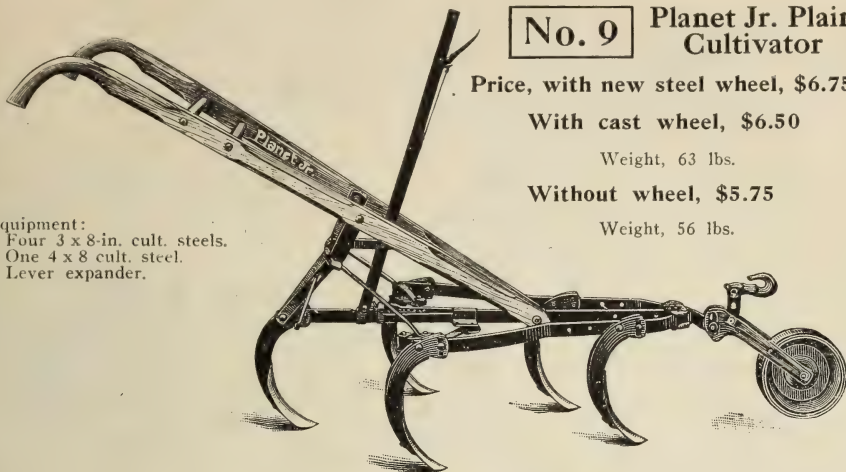
Weight, 56 lbs.

Equipment:

Four 3 x 8-in. cult. steels.

One 4 x 8 cult. steel.

Lever expander.



NO. 9 PLAIN CULTIVATOR, with patent beveled steel teeth (which keep sharp and add 50 per cent. to the wear) is light yet strong, with steel wheel, hollow steel standards and steel draft hook. The frame is extra high, giving good clearance, and the handles are adjustable for height and also sidewise for convenient use in tall growing crops. At once simple and practical, it is always ready for business. It opens to 26 inches and closes to 8 inches. All extras fit it, including sweeps, furrowers, discs, steel plow and any width cultivator steel from 1¼ inches to 4 inches in width.

No. 4 Planet Jr. Plain Cultivator

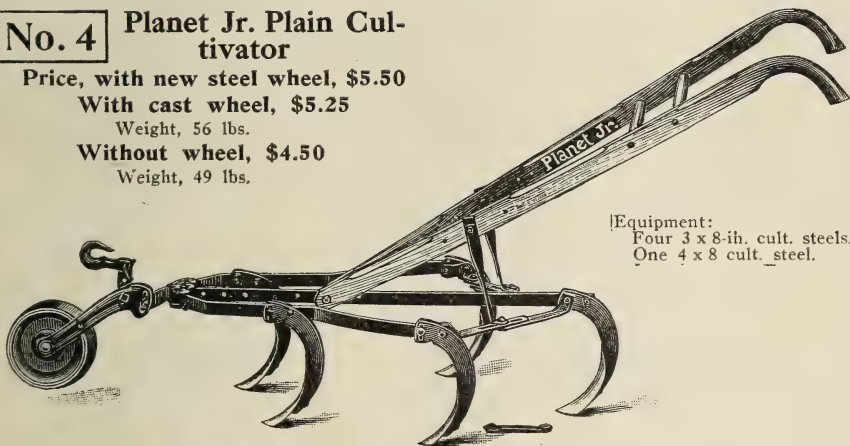
Price, with new steel wheel, \$5.50

With cast wheel, \$5.25

Weight, 56 lbs.

Without wheel, \$4.50

Weight, 49 lbs.



Equipment:

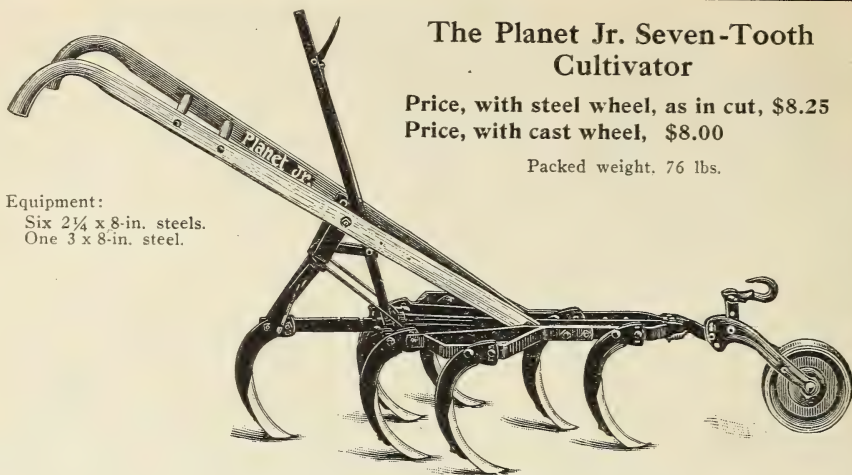
Four 3 x 8-in. cult. steels.

One 4 x 8 cult. steel.

NO. 4. This very popular tool is neat, plain, simple, business-like and does its work to perfection. Has extra high frame, round throated, hollow steel standards with patent beveled steel teeth, and patent expanders, which make an extra-stiff tool, yet allow of quick adjustment for width, and one side may be closed while the other is left open. Satisfactory in every respect. An every-day, all-day tool.

G. W. CARVER, Director Dept. of Research and Experiment Station, The Tuskegee Normal and Industrial Institute, Tuskegee Institute, Alabama, writes January 20, 1914: "Our station has used a good many of your implements, and they have proven satisfactory."

J. FORSTER, Orange, Mass., writes April 9, 1914: "I have had your No. 4 Cultivator for six years and would not be without it for anything."



The Planet Jr. Seven-Tooth Cultivator

Price, with steel wheel, as in cut, \$8.25
Price, with cast wheel, \$8.00

Packed weight, 76 lbs.

Equipment:

Six 2¼ x 8-in. steels.
One 3 x 8-in. steel.

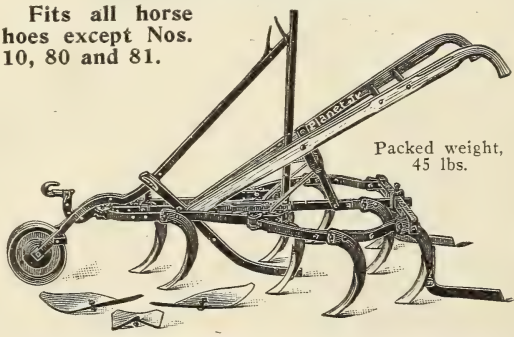
This machine is a favorite where thorough and fine cultivation is wanted and also in wide rows. It finishes all rows up to 36 inches apart, leaving no open furrow next to the row, and will work middles completely at one passage in rows up to 42 inches apart. Can be run deep or shallow. Takes **all width beveled steel** cultivator teeth, sweeps, furrowers, discs and plow attachment. Sold also as an attachment, fitting all Planet Jr. Horse Hoes except No. 10 and No. 81. Price of attachment, \$1.65.

NARROW SEVEN-TOOTH ATTACHMENT. This is another style which works rows up to 36 inches apart. Particularly suited to tobacco growers for cultivation of small plants and for deep or level cultivation. Price of machine with narrow seven-tooth attachment same as above. Attachment only, \$1.65.

NINE-TOOTH ATTACHMENT. This consists of the addition of two extra side bars to our regular horse hoe or cultivator frame (each carrying two teeth and a depth regulator), and a middle bar extension and truss expander. Price, \$7.25.

Nine-Tooth Attachment

Fits all horse
hoes except Nos.
10, 80 and 81.



Packed weight,
45 lbs.

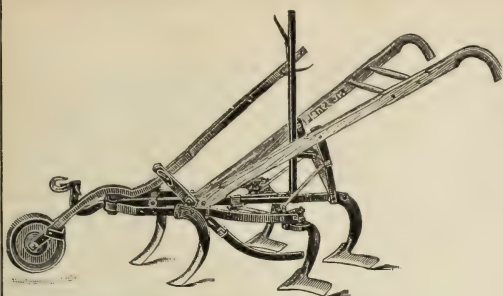
The tool fitted with this attachment leaves **no open furrows next to the row**. It opens to 47 inches and closes to 35 inches is thoroughly braced, and, with the depth regulators, will run from one end of the field to the other without touching the handles, while doing perfect work.

For orchards, vineyards, hop yards and wide cultivation. Excellent for fall-plowed ground and for covering grain.

C. W. MATHEWS, Horticulturist, Kentucky Agricultural Experiment Station, Lexington, Ky., writes June 15, 1914: "Your implements are in constant use upon our experiment farm, and we find them very satisfactory."

ABRAM DAVIS, Absecon, N. J., writes June 22, 1914: "The merits of your farm and garden implements are well and widely known, which I am pleased to emphasize."

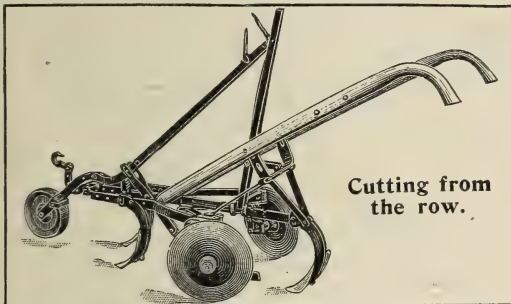
ANDREW TUCK, Maplehurst Farms, Ogdensburg, N. Y., writes July 17, 1914: "I am using the best cultivator in the world, 'Planet Jr.'"



No. 8 Planet Jr. Horse Hoe fitted with two 10-inch and one 12-inch regular sweeps in place of hilling and shovel steels.

point; are especially adapted to Pivot Wheel Cultivators, Orchard, Universal Cultivators and Beet Cultivators. Valuable for shallow work, thistle cutting, etc. 5-inch for deep work, 8, 10 and 12-inch for general work are the most popular sizes.

HOE STEELS are made in two sizes, cutting six and ten inches wide, respectively. They fit the side standards of Planet Jr. Horse Hoes and are generally set to cut away from the row, as shown in the cut. They are fine for surface cultivation, weeding, etc. A set comprising two 10-inch hoes and one 8-inch sweep makes a fine combination. Price, \$1.40.

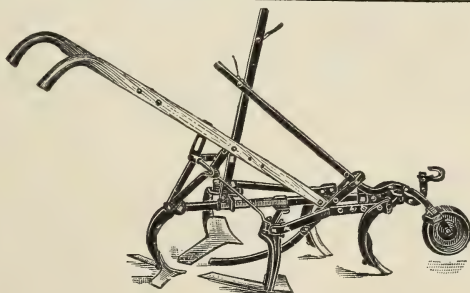


Cutting from the row.

horse plow admirably. The steel moldboard works beautifully, and being reversible, offers double wear. The middle bar carrying it, is strengthened by two extra bars. The landside is steel. Cuts a furrow six to ten inches wide and two to five inches deep as desired. Fits Nos. 4, 7, 8, 9 and 10 horse hoes. Price, \$4.00.

"L. K. EGERTON & SON, Nara Visa, N. Mex., writes May 15, 1912: "I am using Horse Hoe No. 8 now for seven years. Have used your goods since 1882. No better made."

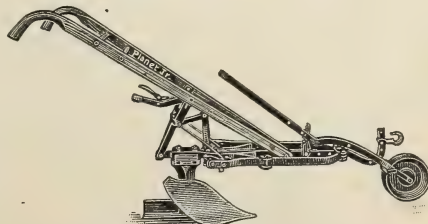
SWEEPS. As shown on page 70, we offer two styles, **regular** and **improved**, in varying widths to suit all level work. The **regular** style from 8 inches to 24 inches, inclusive, are much liked on our Horse Hoes and Plain Cultivators and are especially popular with growers of cotton, tobacco, coffee, beans, corn, etc., where thorough level work is wanted. Two 10-inch and one 12-inch make a good combination. Price, \$1.10. The **improved** sweeps from 3 inches to 24 inches, inclusive, are flatter and the wings approach each other at a sharper angle, making a more penetrating



No. 8 Planet Jr. Horse Hoe fitted with two 10-inch hoe steels and one 8-inch sweep in place of hilling and shovel steels.

DISCS for Horse Hoes and Cultivators. These are furnished for use in place of the hilling shovels and do admirable work. Twelve inches in diameter, with proper pitch for best work, and with our new bearing. The whole face of the disc is free from obstruction and thus does admirably the work of a much larger old-style disc and bearing. Price, per pair, \$3.75.

PLOW ATTACHMENT. This takes the place of a one-



Planet Jr. Horse Hoe fitted with plow attachment.



An Alabama cotton field. Perfect work with Planet Jr. Cultivators fitted with Sweeps



ALFALFA STEEL. This new tooth has given excellent results as a renovator for alfalfa, also where deep work is wanted or hard ground is to be broken. It is our own design and gives excellent satisfaction wherever known. Its penetration is all that can be desired. It fits our horse hoes and one-horse cultivators and also our two-horse and orchard tools. On the latter for deep work, use but five or seven teeth. Price, with bolt, 16c.

STEEL HANDLES. These can be supplied for Planet Jr. Horse Hoes and Cultivators, if desired. Price, \$1.00 per pair, or add 20 cents to list price of regular machines.

HORSE HOE ROLLER. The cut shows the use of the hillers and roller for covering corn, potatoes, etc., and for making ridges for seed drill, wheel hoe or for plant setting. The handles can be set to one side so the operator need not walk on the finished work. Roller, \$2.25.

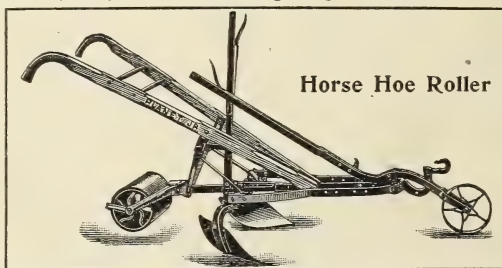
NINE-TOOTH ATTACHMENT. It opens to 47 inches and is suited to all wide cultivation. (See page 44.) Price, \$7.25.

SEVEN-TOOTH ATTACHMENT. Very useful for thorough cultivation in medium and wide rows. Closes up the furrow next the row. Fits all Planet Jr. horse hoes and plain cultivators excepting Nos. 10 and 81. (See page 44.) Price, \$1.65.

NARROW SEVEN-TOOTH ATTACHMENT. Another style which leaves no open furrows next the row. Completes perfectly all rows from 24 to 36 inches at one passage. (See page 44.) Price, \$1.65.

HIGH HITCH ATTACHMENT. This is valuable where oxen or bullocks are used, or wherever the draft point is high. Price, 60c.

THIS SPECIAL HILLING attachment fits all our Planet Jr. Horse Hoes, except Nos. 80, 81 and 10, and is very effective. Sold either complete, as shown, or as an attachment to regular Planet Jr. Horse Hoe.



Horse Hoe Roller



Hilling Attachment
Attachment only,
\$3.85

Complete, as shown
in cut, \$9.25



Strawberry cultivation with Planet Jr. Twelve-Tooth Harrow.

THIS TOOL has rapidly grown in favor with strawberry growers, market gardeners, truckers and farmers because the twelve chisel-shaped teeth do such thorough work, and because the tool is so convenient, durable and strong. The teeth and pulverizer leave the ground in the finest condition, and the operator can set the tool exactly to any depth desired, making delicate work not only possible but very easy.

Improved braces enable one to change the handles in height to suit boy or man, and also **sidewise**. It is a great advantage to be able to move the handles to one side when cultivating blackberries, raspberries, vines, hops, etc., saving the hands, the clothes and the crop. **The expander works with ease, yet holds the tool thoroughly rigid.**

THE HAND LEVERS regulate both width and depth. The tool expands to thirty-two inches and contracts to twelve.

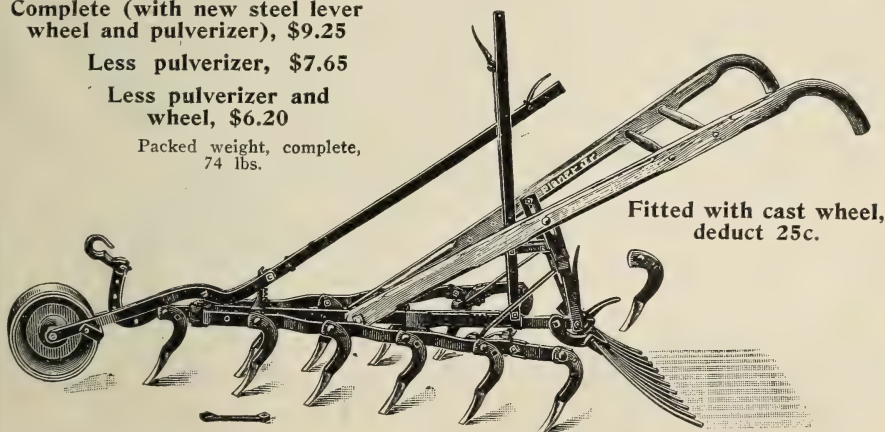
Planet Jr. Twelve-Tooth Harrow, Cultivator and Pulverizer

Complete (with new steel lever wheel and pulverizer), \$9.25

Less pulverizer, \$7.65

Less pulverizer and wheel, \$6.20

Packed weight, complete,
74 lbs.



Fitted with cast wheel,
deduct 25c.

HARRIS S. LEE, Sandwich, Ill., writes June 6, 1914: "After using your machines here and in Washington for nearly ten years, will say they are the "biggest little machines" on the truck farm."

Twelve-Tooth Harrow—Continued

THE STRAWBERRY GROWER finds this **tool** invaluable, as it works so closely and thoroughly, deep or shallow, without throwing earth on the plants. He uses it to keep the ground loose and clean and to **work up and bed the runners; the round-throated teeth** turn them aside without injury, ready to root in the mellowed soil.

FARMERS AND GROWERS use the harrow in deep or close cultivation, or when desiring to work the crop thoroughly, but without hilling.

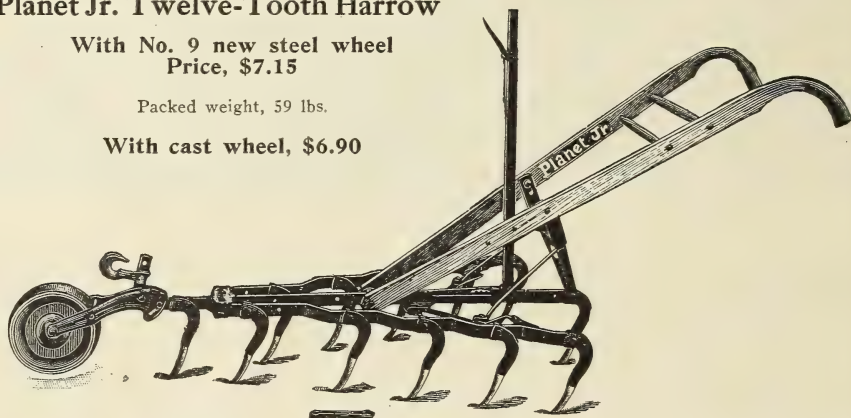
THE FOOT-LEVER PULVERIZER is an admirable tool for fine cultivation and preparing ground for the seed drill or for plant setting.

Planet Jr. Twelve-Tooth Harrow

With No. 9 new steel wheel
Price, \$7.15

Packed weight, 59 lbs.

With cast wheel, \$6.90



WITH THE NO. 9 WHEEL the 12-tooth harrow gives excellent satisfaction and is lower in price. The wheel and arms are substantially made of steel, but lack the convenience of the hand lever.

PLANET JR. TWELVE-TOOTH HARROW WITH NO. 4 EXPANDER

Some prefer this expander, as it is very stiff, strong, simple, easily adjusted, and low in price. It also allows one side of the tool to be closed while the other is open. It makes a light but effective cultivator for fine work.

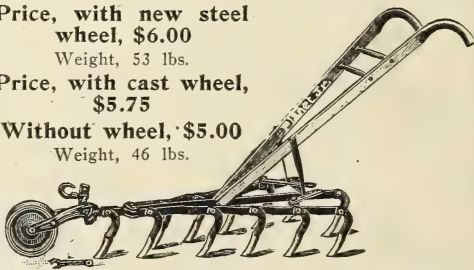
Price, with new steel
wheel, \$6.00

Weight, 53 lbs.

Price, with cast wheel,
\$5.75

Without wheel, \$5.00

Weight, 46 lbs.

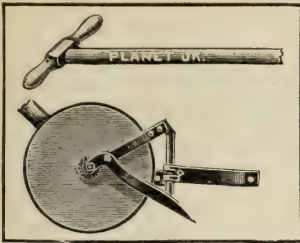


W. H. PITKIN, Congers, N. Y., writes April 15, 1912: "I have bought one of your Planet Jr. Cultivators complete with all implements required for my garden cultivation. Am highly pleased with its work and congratulate you on having brought out so useful a cultivator. Adds pleasure to agricultural pursuits."

CLARENCE JENSEN, Huntsville, Utah, writes April 16, 1912: "I have your Planet Jr. Twelve-Tooth Horse Cultivator, it gives entire satisfaction."

CHARLES PETERSON, Bayfield, Wis., writes June 16, 1912: "We are using three of your cultivators (12-tooth cultivator, horse hoe and cultivator and two-wheel hand cultivator) and will use no other. I think they are the best. Are giving good satisfaction."

PHILIP A. BAKER, R. F. D. No. 1, Benton Harbor, Mich., writes April 9, 1914: "I have a Twelve-Tooth Harrow, Pulverizer and 18-inch Sweep—it is bully."

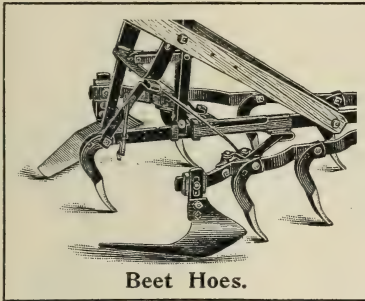


STRAWBERRY RUNNER CUTTER

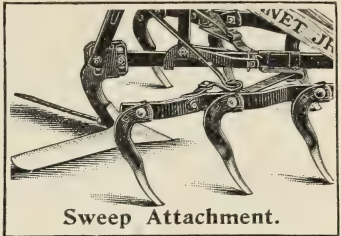
Price, less handle, \$1.85. With handle, \$2.50

THIS is a 10-inch steel disc mounted on an out-rigger; it fits on either side frame of our 12-tooth harrow. It has a castor action, is adjustable for depth and sidewise, and has an adjustable leaf guard which lifts the leaves to avoid trimming them off and weakening the plants. It is thoroughly approved by strawberry growers. We can supply a handle (see cut) so this attachment can be used independently of the cultivator.

SWEEP ATTACHMENT. Price, complete with standard, \$1.35. We sell as an extra an 18-inch improved sweep with special standard, used in place of the pulverizer for leveling and weed cutting.



Beet Hoes.

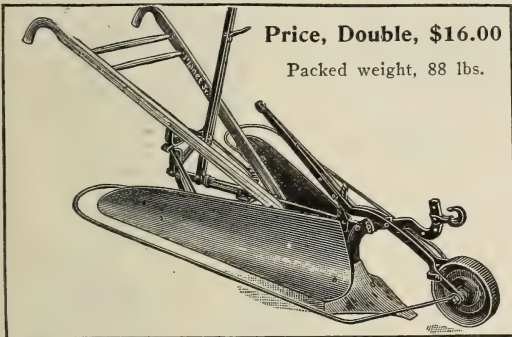


Sweep Attachment.

It is adjustable in height, throws a little earth each way, hilling up a trifle; is sure destruction to weeds. Also sell a set of three sweeps and standards to go on the 1915 harrow. Price, one 15-inch and two 10-inch improved sweeps, \$3.50.

BEET HOES are used on the 12-tooth harrow for hoeing beets and all crops in rows from 15 to 30 inches. They do admirable work, leaving raising the leaves out of danger, making very close work easy and safe. **Price, per pair, including special standards, \$1.40.**

PLANET JR. DOUBLE AND SINGLE CELERY HILLERS



Price, Double, \$16.00

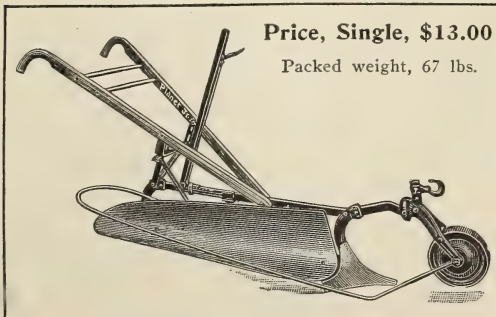
Packed weight, 88 lbs.

Are strengthened for 1915. The leaf lifters are adjustable in height by bending slightly, and are especially valuable for first workings. With their aid some of our best and largest growers hill their celery **without any "handling."** We equip both with lever expanders, leaf lifters and long steel landsides, making them run steadily and handled easily. The Double Hiller is fitted with steel lever wheel, and the Single Hiller with plain steel wheel. The hilling blades are 43 inches long, adjustable in width or height as wanted; the Double machine works

all rows up to four feet apart. The Single machine works all widths, and where market-gardeners plant close and first bleach every other row, it is "just the thing." Before hilling, the soil should be thoroughly loosened with a horse hoe.

JAMES KILLE, Rural Route No. 3, Asheville, N. C., writes March 27, 1914: "Have used your tools for twenty-five years and still find them the best on the market."

C. C. HAVEN, Port Orange, Fla., writes: "Would not be without Planet Jr. machines for ten times their cost."



Price, Single, \$13.00

Packed weight, 67 lbs.



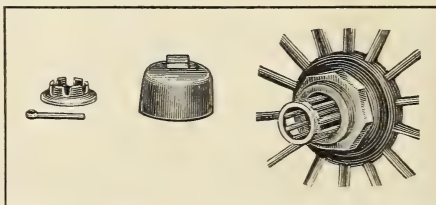
Thoroughly working two rows of corn, four feet apart, with No. 72 Planet Jr. Pivot Wheel Cultivator.

TWO-HORSE IMPLEMENTS

Over 100,000,000 acres of field corn are grown annually in the United States, and the crop averages about 3,000,000,000 bushels and is valued at \$1,500,000,000. At the present time corn is unprecedentedly high in price, raising the total annual crop to about \$2,000,000,000. Probably 75 per cent. of this vast crop is cultivated with two-horse implements, and doubtless over 50 per cent. is planted at an average distance apart of 3½ feet. It is also largely planted with tools dropping two rows at once and that carry markers, which insure each two rows being fairly equi-distant. Nearly four million acres are devoted to the growing of potatoes. The Planet Jr. No. 72 Two-Row Cultivator is the best tool ever invented for the thorough and economical cultivation of corn, potatoes and other crops in rows from 28 inches to 44 inches apart. It will easily save its whole cost in **one season**, when used on fifty acres.

No. 76 Planet Jr. One-Row Cultivator is equally admirable for **one-row** cultivation up to 4 feet apart, the gangs being adjustable by a convenient lever to or from the row instantly, without stopping the team.

ROLLER BEARINGS. Recognizing the great value of roller bearings for our Nos. 72 and 76 Two-Horse Cultivators, we supply them for 1915. The whole cost (\$5.00) is soon repaid, as the wear is very light and the wheels run true for years. One set of roller bearings will outwear three plain bearings, and therefore are economical, besides making a steady, easy-running tool. Greatly improved for 1915.



O. R. FRAUENHEIM, Random Lake, Wis., writes March 18, 1914: "I have several cultivators and find that the Planet Jr. implements possess more merit than any other machines.

"I have had a No. 72 Cultivator in use four years and cannot see how I could do without it. Just to tell you what I did with the No. 72—last year I went into a four-acre field (the field was measured and was exactly four acres) at ten o'clock in the morning, and ten minutes after twelve I had cultivated the field over once. While this may not seem to go very fast, I believe it was very good, taking into consideration that it was a very warm day and it was a hillside field and rather rough. I cultivated just as good or probably better than a single-row machine could do.

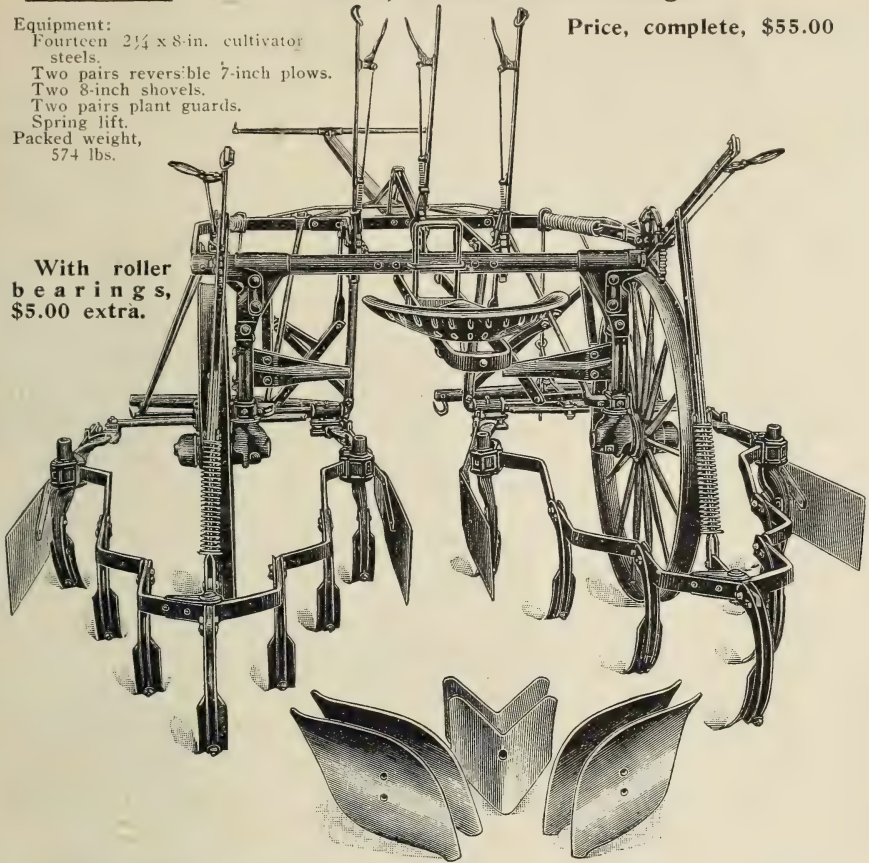
"I only plant about twenty-five acres of corn annually, and the machine saves me its extra cost every year, owing to scarcity of help."

No. 72**Planet Jr. Two-Row Pivot Wheel Cultivator,
Plow, Furrower and Ridger****Equipment:**

Fourteen $2\frac{1}{4}$ x 8-in. cultivator
steels.
Two pairs reversible 7-inch plows.
Two 8-inch shovels.
Two pairs plant guards.
Spring lift.
Packed weight,
574 lbs.

Price, complete, \$55.00

**With roller
bearings,
\$5.00 extra.**

**No. 72D (with 14 cultivator teeth and plant guards only). Price, \$52.50**

Weight, 555 lbs.

THE NO. 72 PLANET JR. TWO-ROW CULTIVATOR is the highest result of our practical farm life. It completes the cultivation of two rows at one passage, all widths from 28 to 44 inches, inclusive, and is specially built to do this **when the rows are irregular**. The operator can make changes in width of gangs while in motion, by means of handy levers.

Important improvements have been made for 1915. The tongue lever ratchet and pin are now made of steel, as are also the ratchets and pins of the gang regulating levers, while adjustable stops make the tool return to the same depth of work without attention.

Cold rolled $1\frac{1}{4}$ -inch steel axles, and the dust-proof pivot bearings are provided with grease cups. The gang bar joints are greatly improved. Heavy steel balance springs, adjustable, make the handling of the gangs very easy, even when equipped with spring trip standards.

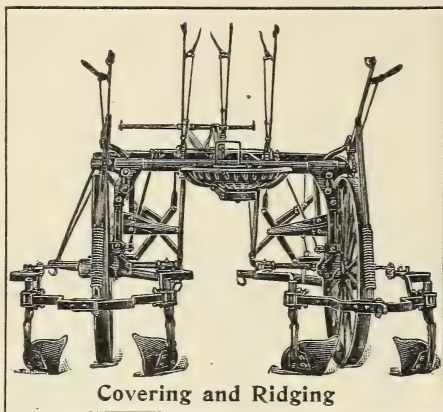
AS A SINGLE-ROW cultivator this tool works rows from 28 inches apart up to 5 feet.

IN LISTED CORN the hinged tongue, adjustable frame and front teeth combine to make this difficult cultivation satisfactory.

IN CHECKROWS it surprises everyone. Planted with two-row seeders, the gang working **between** the rows need not be changed from one end of the row to the other,

so that the driver has **but one** lever to handle. When going **crosswise of the rows** he need not change either lever, because the rows are always the same distance apart.

THE TOOL HAS FIVE LEVERS. This simplifies its management so that a boy can operate it with success. The center lever adjusts the hinged tongue, regulating the depth of the front teeth and leveling up the machine to suit all heights of neck yokes. The outside levers regulate the depth of the teeth in the rear, while the intermediate levers are used in changing the widths of the gangs to suit irregular planting without stopping the team. The levers open or close **both sides** of the frame equally, so that the teeth always work the spaces thoroughly.



Covering and Ridging

THE FOUR ADJUSTABLE STANDARDS take the plows which are used to ridge and cover. For the latter purpose they are used as shown in the cuts and enable the operator to cover at one passage two rows of manure or potatoes or corn, peas, beans, etc., that have been dropped in the furrow, up to 44 inches apart.

THE PIVOT WHEELS work quickly and make the cultivation of crooked rows easy. They can be made stationary when desired. They adjust for all width rows, 28 to 44 inches, inclusive.

THE WHEELS are heavy, with fourteen spokes each, and guaranteed.

THE ARCH AND SEAT are unusually high, 34 inches in the clear; the seat is adjustable back and forth and in height, and will cultivate corn when five feet high.

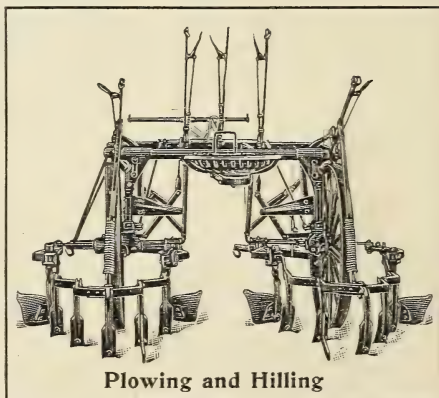
WHEN PLOWING AWAY from corn or other crops, two rows may be plowed away from at once and cultivated back again at the same passage; in the same way two rows may be hilled by the plows and finished by the cultivator teeth at one passage.

PLANT SHIELDS. Each tool is furnished with four plant shields, adjustable in height and made to swing so as to clear themselves of obstructions.

We make the No. 72 in two other widths; wheels and frame expand to 54 inches (\$7 extra) and 64 inches (\$10 extra), respectively; they are especially adapted to sugar cane and pineapple cultivation, and for all crops from four to five feet apart with wide extending growth, like cantaloupes, cucumbers, strawberries, tobacco, etc. Special circular on application.

THE EQUIPMENT. Seven $2\frac{1}{4}$ -inch reversible high carbon steel teeth of the best design and finish are carried by each frame so that the work is thorough, even at the greatest width of 44 inches. Four large plows take the place of the front cultivator teeth when wishing to plow or hill the crop; they are reversible, giving double wear. Two wide shovels are useful for marking out two rows at once, from 28 to 44 inches apart, or to use in place of the rear teeth for hilling.

THE STANDARDS are hollow steel, the five rear ones being attached directly to the frame because they do not need any adjustment except what is provided for by the levers, but the front standards are all adjustable for depth and angle, throwing to or from the rows, as desired. All may have break pins.



Plowing and Hilling

J. J. KEATOR, Supt. Osborn Farm, Garrison, N. Y., writes March 13, 1913: "I have been using your tools for twenty-five years and do not need to say that they are of the best. Will get several cultivators later on."

WYPER BROS., Bundaberg, Queensland, write March 27, 1914: "We are pleased to be able to report that the No. 72 Cultivators which you sent us, arrived quite safely and have filled expectations in every way."



A New Jersey bean field. Two rows at one time with the Planet Jr. No. 72.

THINK OF THE SAVING made in cultivating perfectly two rows of potatoes, beans or corn, or any crops planted in rows not over 44 inches apart, **at a single passage.** This means double speed at a single cost, for the arrangement of the fourteen teeth is such that all the ground is well tilled and no open furrows are left next to the row, while **one man** attends easily to the work, **with one team.**

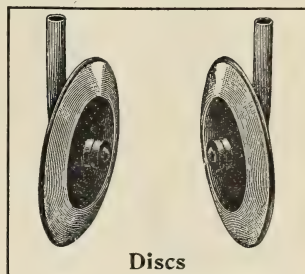
AT WORK always turn the team to the right at the headlands by skipping two rows at one end of the field when turning. Much easier for man and team.

SPRING TRIPS can be furnished for Nos. 72 or 76 Riding Cultivators. (See page 54.) When sold as an extra, price is \$1.50 per tooth; when in place of solid standards, \$1.25 per pair. In ordering specify for what machine wanted.

EXTRA ATTACHMENTS

DISCS, SWEEPS, Hoe Steels and Furrowing Steels described on pages 56, 69 and 70, fit this machine.

UMBRELLA SOCKET. For all our Pivot Wheel Cultivators we can furnish an umbrella socket to fit on the seat bar, just back of the seat. Price, 75c.



J. M. AMOS, Rushville, Ind., writes August 25, 1914: "I have demonstrated to my neighbors that I can produce more corn with one of your No. 72 Cultivators and with only two horses and shallow cultivation than they do with three horses, and I can grow corn within three feet of the fence, while with the three-horse plow you must have about one rod to turn around next the fence."

AMOS GARRETSON, Pearland, Texas, writes June 6, 1914: "B. F. Phipps, of Pendleton, Ind., got this plow (No. 72) for me about twelve years ago. To-day it is the best plow in Texas."

S. B. JONES & SON, Proprietors Sunnyside Stock Farm, Watertown, Wis., writes June 10, 1914: "Some few years ago we purchased one of your two-row Planet Jr. cultivators, which we might mention is the best we have ever used."

HENRY LAKE SONS' Co., Black River Falls, Wis., write May 4, 1914: "The No. 72 is very satisfactory in our nursery work and excels any other make we have used, which makes it by far the cheapest in the end."

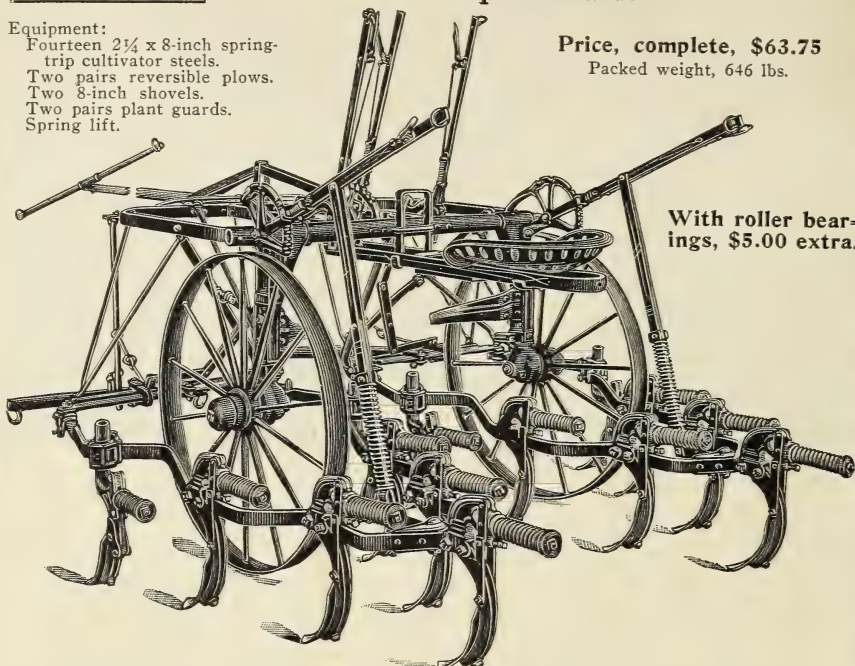
ALBERT A. CANNADAY, Roanoke, Va., writes March 28, 1914: "It affords me great pleasure to recommend your No. 72 Planet Jr. Two-Row Cultivator. I have four other good makes which I would give for another one like yours. This is about the strongest language I can use to show my appreciation for your cultivator."

No. 72 F**Two Row Cultivator equipped with Spring Trip Standards****Equipment:**

Fourteen $2\frac{1}{4}$ x 8-inch spring-trip cultivator steels.
Two pairs reversible plows.
Two 8-inch shovels.
Two pairs plant guards.
Spring lift.

Price, complete, \$63.75

Packed weight, 646 lbs.



With roller bearings, \$5.00 extra.

72G (with 14 spring trip cultivator teeth and plant guards only). Price, \$61.25

Weight, 628 lbs.

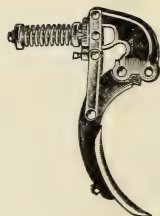
Where soil is stony, rough or full of obstructions it is often difficult to use machines equipped with solid standards without too many stoppages to replace break pins, so the demand is increasing for the best device to obviate this annoyance. This has proved to be a satisfactory spring trip standard. We have improved the Planet Jr.

Spring Trip for 1915 by increasing the pressure of the compression spring, and we can now recommend them in the highest terms. They save a great deal of time and will come into more general use as their merits are understood.

The illustrations show their construction and operation. The standards will take discs, sweeps, hoe steels, furrowing steels, etc., the same as the solid standards. The new spring lift on this machine makes the handling of the gangs very easy, and is a great improvement.



Fits No. 76 Cultivator and front teeth of No. 72

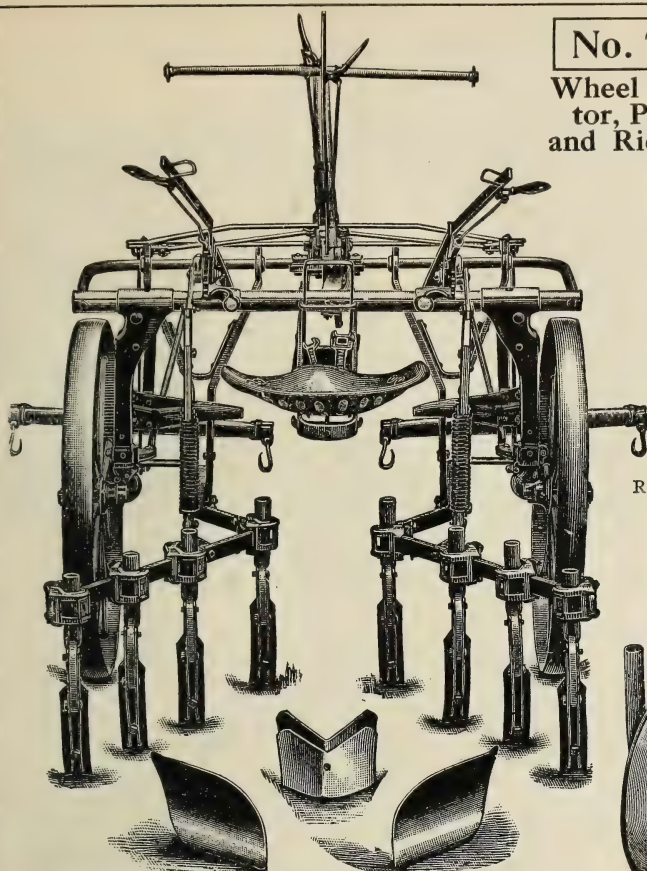


Fits No. 72 Cultivator

E. M. BECKWITH, Orwell, Vt., writes July 15, 1913: "I have used the No. 72 machine with roller bearings three days in all, just long enough to learn how to run it, and to see the nice work it will do. It is a great labor-saving machine, and I would not know how to farm without it."

B. L. SMITH, Cecilhill Farm, Nashville, Ark., writes April 6, 1914: "The construction of the machine (No. 72) is admirable, being, in fact, the best constructed cultivator we have ever used."

J. J. ENGLAND, R. F. D. No. 3, Springville, Ala., writes March 26, 1914: "I would not try to farm without Planet Jr. tools."



No. 76 Planet Jr.
Pivot
Wheel Riding Cultiva-
tor, Plow, Frower
and Ridger with Discs

Price, \$48.00

Weight 526 lbs.

Roller bearings,
\$5.00 extra

Regular Equipment:

Eight 2 $\frac{1}{4}$ x 10-in. culti-
vator steels.
One pair 7-inch plows.
Two 8-inch shovels.
One pair 14-inch discs.
Spring lift.

No. 76B.	8 cultivator steels, 1 pair plant shields, 2 pairs of Price	Weight
	plows, 2 8-inch shovels.....	517 lbs.
No. 76C.	8 cultivator steels, 1 pair seven-inch plows, 1 pair	
	plant shields.....	44.75
No. 76D.	8 cultivator steels, 1 pair plant shields.....	43.25
		489 lbs.

THE NO. 76 IS A COMPARATIVELY NEW implement which combines in itself nearly all the advantages of our earlier one-row cultivators. The combination of the best parts of these tools makes a machine which is without a rival. The arch is 34 inches high, frame and tongue are steel, and the change in width of the wheels is easy. It has improved levers, and the gang frame is extra strong. The **extra wide** arch is very desirable. The draft is arranged to insure satisfactory work in all conditions of soil.

Improvements for 1915 are malleable pivots and steel axles, both practically dust-proof. Ratchets and pins are steel. Heavy extension springs balance the tool gangs and adjustable stops reset the tool instantly to the proper depth, without effort.

THE FOURTEEN-SPOKE PIVOT WHEELS make the guiding a pleasure.

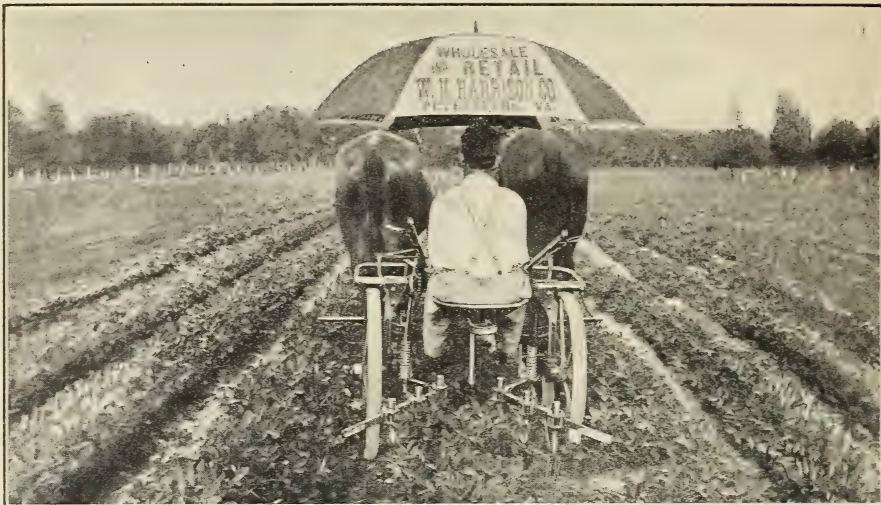
THE SEAT is large and comfortable, adjustable up and down, back and forth.

THE NEW LEVERS and springs regulate depth and pressure on the teeth.

THE CENTRAL LEVER operates the hinged tongue, regulating the depth of the front teeth and leveling the machine; **the same lever moves the teeth instantly, either closer to or further from the row, as desired, while the team is in motion.**

CONSTRUCTION. All parts steel except a small percentage of malleable iron.

ROLLER BEARINGS are worth far more than the \$5.00 extra. (See page 50.) They run true and easily, and the wear is so small they soon pay the cost.



Fifty-acre field of peanuts grown by Mr. Malone, of Rowanta, Va. A successful crop after one of the dryest seasons ever known, for which Mr. Malone gives entire credit to the use of the No. 76 Planet Jr.

IMPROVED SPRING LIFTING LEVERS have been placed on the gang frames.

THE ARCH is 34 inches high, clearing corn until five feet or more.

IT WORKS ROWS from 28 to 48 inches, cultivating, plowing or hilling.

MARKS OUT ROWS from 24 to 44 inches apart, two at once, and with the plows will cover or make up drills beautifully.

This cultivator is simple, roomy, strong and easily understood; will not get out of order easily and works admirably. Every part is made of the best material, in the best manner and is of the finest quality, design and finish.

AT WORK. Always turn the team to the right at the headlands, skipping one unworked row each round. Much easier for both man and team.

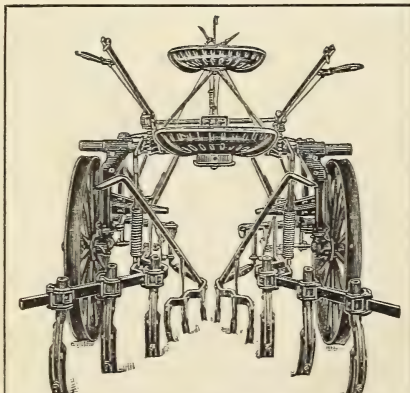
UMBRELLA SOCKET. For all our Pivot Wheel Cultivators we can furnish an umbrella socket to fit on the seat bar just back of the seat. Price, 75c.

THE PAIR OF DISC PLOWS shown with the machine on page 55 are much liked. They are used front next to the row, and can be set to throw either to or from the row. Price, separate, 12-inch, per pair, \$4.25; 14 inch, per pair, \$4.75.

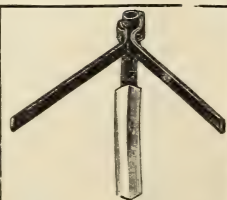
THE TOBACCO HOE ATTACHMENT

is equally useful in working cabbage, tomatoes, peppers and plants generally that are set from two to four feet apart in the row; particularly useful where fields are well prepared and fairly level. The operator not only hoes the row, but also between the plants; the work being in open sight. Usually a boy drives.

A CENTER TOOTH ATTACHMENT makes a complete fallow or orchard cultivator, working thoroughly a total width of four feet.



Tobacco Hoe Attachment. Price, including extra seat, \$7.75.



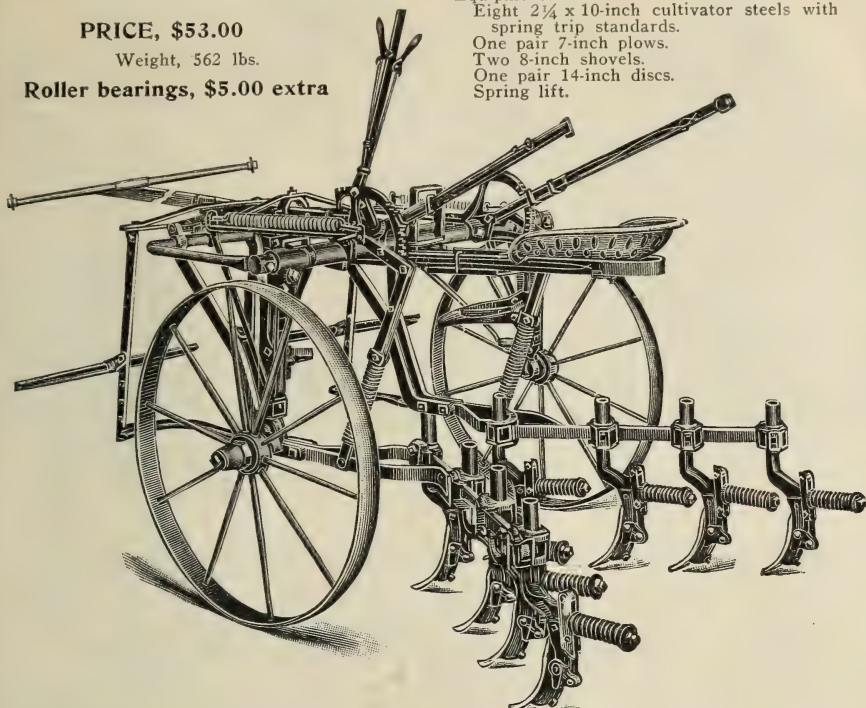
Center Tooth Attachment. Price, \$1.50.

No. 76F**Planet Jr. Pivot Wheel Riding Cultivator with Spring Trip Standards****PRICE, \$53.00**

Weight, 562 lbs.

Roller bearings, \$5.00 extra**Equipment:**

Eight 2¼ x 10-inch cultivator steels with
spring trip standards.
One pair 7-inch plows.
Two 8-inch shovels.
One pair 14-inch discs.
Spring lift.



No. 76E.	8 spring trip cultivator teeth, 1 pair plant shields, 2 pairs of plows, 2 8-inch shovels.....	Price \$51.00	Weight 550 lbs.
No. 76H.	8 spring trip cultivator teeth, 1 pair 7-inch plows, 1 pair plant shields.....	49.75	542 lbs.
No. 76G.	8 cultivator teeth, 1 pair plant shields.....	48.25	531 lbs.

NO. 76 TWO-HORSE CULTIVATOR is shown above with spring trip standards. The increasing demand for spring trips is such that we now offer No. 76 equipped with them as a separate machine. Some of our customers say that a stone as large as a man's fist, imbedded in clay when it is fairly dry, is sufficient obstruction to cut off a break-pin, and that they prefer to pay the difference in the cost for the spring trip which takes care of itself.

Spring trip standards are, of necessity, heavier than plain ones, but the new spring lift makes very easy work.

ANDREW GLEIM, R. F. D., Wheelersburg, Ohio, writes June 9, 1914: "I think the No. 76 is the finest cultivator on the market to-day. Especially for potatoes this cultivator is worth a half-dozen other makes."

F. H. JENNINGS, Rome, Ill., writes June 2, 1914: "I am using several of your tools and find them all right in every respect."

NICK B. BUNN, Nashville, N. C., writes June 15, 1914: "I have two of your No. 76 Riding Cultivators. Have been highly pleased with their work. In both cotton and corn, and on hilly and rough land, they are not to be surpassed by any cultivator that I have yet seen. It seems a great pity that we of the South continue to waste so much time in working one-horse implements."

H. A. HERMANN, Chief of Department of Horticulture, Estacion Experimental Agronomica, Santiago de Las Vegas, Cuba., writes June 6, 1914: "I am familiar with the goods that you make and have obtained excellent results from them for many years. Each time the opportunity presents itself, I take pleasure in recommending them."



No. 42 Planet Jr. Universal Cultivator at work in young peach orchard, National Farm School, Doylestown, Pa.

THE PLANET JR. ORCHARD AND FALLOW LAND CULTIVATORS

These tools are very popular for cultivation of orchards, vineyards, hopyards, etc., and for fallow land work. They are largely used in California for this class of work. For deep stirring they require a four-horse team. They are used for working and hilling crops when not over two feet high, such as beans, potatoes, etc., doing two or three rows at one passage, also for making irrigation furrows. They cultivate much more thoroughly than the disc harrow, working deeper with less draft, and kill weeds better. The teeth are reversible and self-sharpening. Most of our special teeth fit them. Sweeps of all widths are used on them for level cultivation, or a combination of cultivator teeth and sweeps.

They may be used with furrowing teeth for marking out rows from two to five feet apart, and also for hilling, and with two or three pairs of plows for covering **two or three rows at once.**

They do work superior to the disc harrow, except in trashy ground, often doing twice as much at one passage with the same draft. We supply superior discs specially adjusted for the most work with lightest draft, as an extra, making an excellent **combined** cultivator and disc harrow.

ULFERT POPPEN, Estelline, S. Dak., writes September 23, 1913: "I bought one of your Universal Cultivators in 1902. It has been used on my farm each year, and I think it the most valuable tool I ever owned. I use it to cultivate the land before seeding, and get a better seed bed and better yield of grain by so using it than I have been able to get with any other method. I do not use a disc harrow. It is equally as good for preparing the land for planting corn and better than a disc harrow for this purpose. They ought to be used on every farm in this country, and I am sure that any progressive farmer would get most satisfactory results."

J. C. GOODNES, Otis Orchards, Wash., writes April 6, 1912: "I used a Planet Jr. No. 41 on the light volcanic ash soil of the Yakima Valley last season and found it an excellent all-around tool. With the addition of the discs and patent weeders it is now, in my opinion, the best cultivator on the market."

C. A. WILKINSON, Eltham, Taranaki, New Zealand, writes December 19, 1912: "Your implements give every satisfaction to users, and I have a continuously satisfactory sale for same."

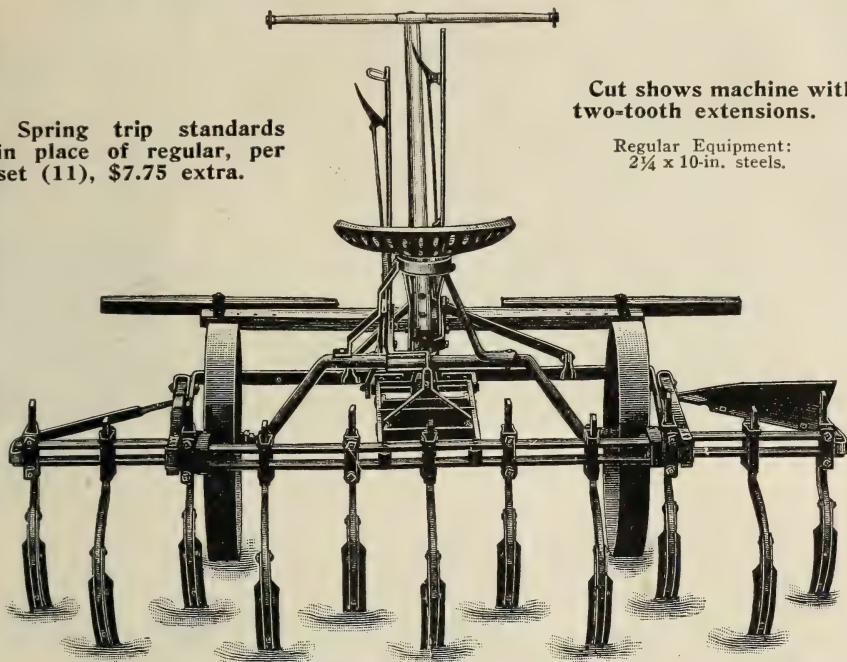
J. C. MCKENZIE, Secretary Wisconsin State Board of Agriculture, Madison, Wis., writes February 25, 1913: "I can cheerfully recommend your goods as being first class in every particular."

No. 41**Planet Jr. Orchard and Universal Cultivator**

Spring trip standards
in place of regular, per
set (11), \$7.75 extra.

Cut shows machine with
two-tooth extensions.

Regular Equipment:
2¼ x 10-in. steels.



	Price	Width of Cut	Packed Weight
With two-tooth extensions.....	\$48.00	6 ft. 6 in.	495 lbs.
With one-tooth extensions.....	43.00	5 ft. 3 in.	418 lbs.
Without extensions.....	38.00	4 ft.	390 lbs.

NO. 41 PLANET JR. Orchard and Universal Cultivator is built to combine strength, lightness, adjustability and efficiency to the fullest extent in one tool, representing in itself the advantages of our earlier patterns, combined with important improvements.

THE STEEL WHEELS are low and entirely enclosed by the frame; are 40 inches apart.

THE TONGUE IS STEEL, hollow and of rectangular section, very strong.

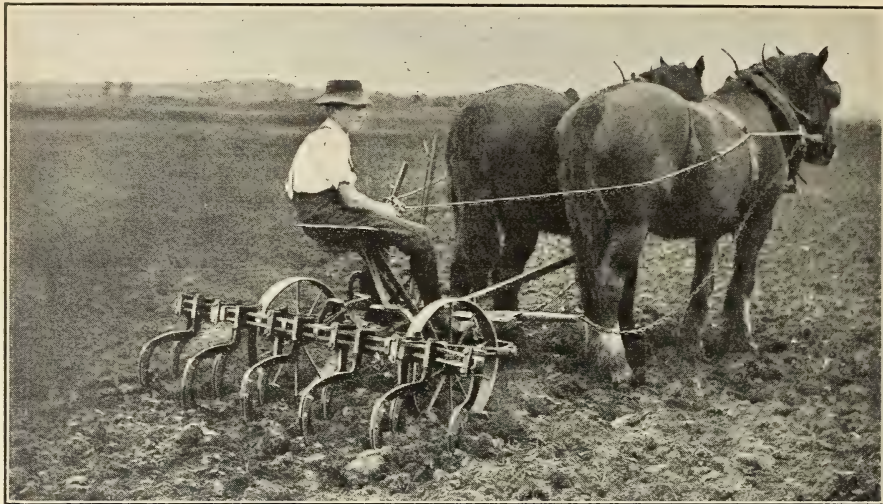
THE FRAME is high carbon steel, compact in form, well braced, heavy and strong. **WITHOUT THE EXTENSIONS**, it cuts 4 feet in width; it has seven stiff steel standards, carrying 2¼ x 10-inch steels.

WITH THE EXTENSIONS, it cuts 6 feet 6 inches, carrying eleven teeth, and the frame can be changed to cut any width from 6½ down to 4 feet in width.

ALBERT EASTON, Launceston, Tasmania, writes March 11, 1909: "At a trial on my ranch near Launceston, Tasmania, of the Planet Jr. No. 41 Universal and Orchard Cultivator, I am pleased to say that it did excellent work and was easily operated and adjusted for width of rows. For lightness of draft when either rigged up for three or four rows, it cannot be excelled, and I heartily recommend it to all fruit growers."

DR. WARREN B. DAVIS, Lindsay, Cal., writes January 2, 1912: "In my orange grove I use a Planet Jr. Orchard Cultivator, and it gives me pleasure to recommend it to others, for it is O. K. in every way."

J. E. NISH, Rialto, Cal., writes April 8, 1912: "Have used your No. 41 for fifteen years. Remarkable what a machine it is. To my mind it has no equal."



No. 41 Universal Cultivator working on the farm of Mr. Kirkwood, East Maitland, New South Wales, Australia

THE TEETH. The regular equipment is $2\frac{1}{4}$ x 10-inch reversible steels, but other widths and also sweeps, furrowers, irrigation steels, alfalfa steels and hoe steels can also be supplied, thus adapting it perfectly for cultivating orchards and for use in vineyards and hop yards and for renovating alfalfa fields. An especial favorite with orange growers.

IMPROVED SWEEPS. Made to cut 3, 5, 8, 10, 12, 15, 18 or 24 inches wide. Fig. 3 shows 5-inch (price, 28c.), which are excellent for level work and dry countries. Ten-inch (38c.) are death to Canada thistles. $2\frac{1}{4}$ -inch teeth in front and 10 or 12-inch sweeps in rear also make an excellent combination.

THE TREE AND FRUIT SHIELD

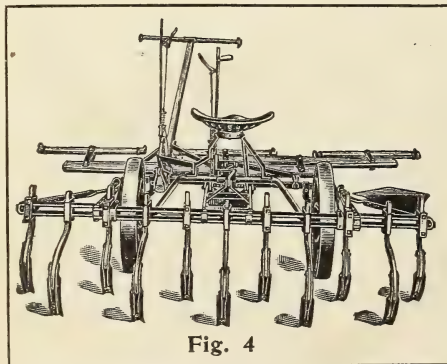


Fig. 4

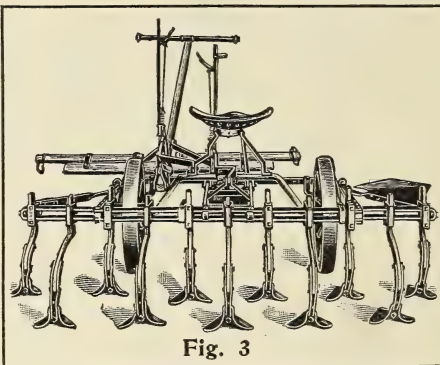


Fig. 3

is placed on the right to be used next the tree row and prevents injury to fruit and limbs.

THE STANDARDS are adjustable up, down and sidewise. Are heavy and high carbon steel.

SIDE HITCH FOR TWO HORSES.

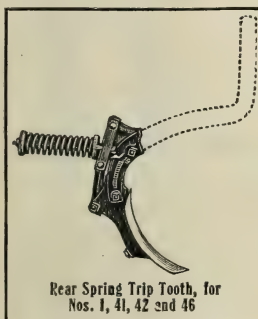
With the tongue set fifteen inches to the left (Fig. 3), the tool is arranged for working under low-branching trees for orange and orchard cultivation. This creates some side draft, but it can be largely overcome by setting the teeth shallowest next to the trees, and thus saving the roots.

THE TONGUE is steel and is hinged to assist in adjusting for depth and for large and small teams.

CHARLES E. WHITE, Nurseries and Orchards, Penrose, Col., writes March 19, 1913: "I own one of the No. 41 Orchard Tools and like it very much."



Planet Jr. Universal Cultivator at work in a foreign orchard.

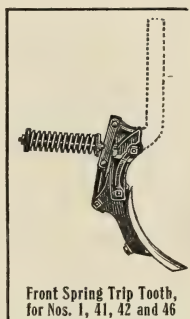


Rear Spring Trip Tooth, for
Nos. 1, 41, 42 and 46

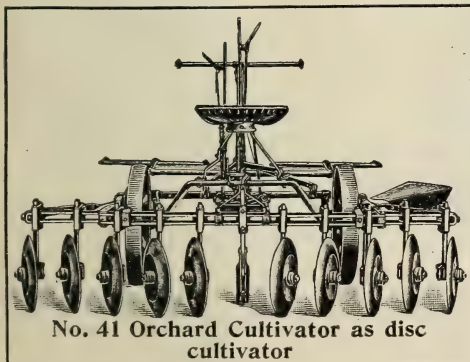
FOR THREE HORSES.—Add to the above tongue arrangement a triple-tree evener and single-tree (Fig. 4). The tool then works admirably with no side draft. Price of the three-horse hitch, \$3.50.

SPRING TRIP STANDARDS.—For 1915 we can supply these for all our Orchard Cultivators. Price as follows:

- \$5.00 extra per set of 7
- 6.25 extra per set of 9
- 7.75 extra per set of 11
- 9.00 extra per set of 13



Front Spring Trip Tooth,
for Nos. 1, 41, 42 and 46



No. 41 Orchard Cultivator as disc
cultivator

The above prices are for machines ordered with spring trips in place of regular teeth.

IRRIGATION STEELS (see page 69), per set of three, \$2.50.

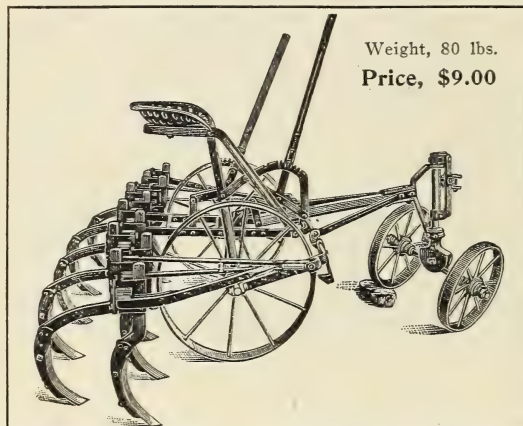
DISCS. We supply a set of ten discs and special standards as an extra, used as shown. Price, 16-inch, \$4.50 per pair, or \$20.00 per set. This makes a capital disc harrow, light in draft and under perfect control from a comfortable seat. The carrying wheels reduce the draft and regulate the work. The attachment is admirable for orchard and vineyard work and for preparing ground for seeding and other surface cultivation. They fit Nos. 41, 42, 1 and 46.

RUNYON & DORSEY, Courtland, Cal., write April 10, 1914: "We are using a number of Planet Jr. Cultivators and like them very much."

E. O. GLEASON, Putnam, Conn., writes June 1, 1914: "I have used your tools for the past thirty-five or more years and find them satisfactory in every way. Have literally worn them out and never had any of them break."

THE Planet Jr. Orchard Cultivator does rapid and thorough work and is strong and well designed for either deep or wide cultivation. The standards take almost all of the steels shown on a later page, and the tool works well under many varying conditions. Being adjustable for width from a cut of four feet to six feet six inches, it is admirable in large orchards, vineyards, hopyards and all broad cultivation.

Two Wheel Fore-Carriage for Nos. 41, 42 and 46 Orchard Cultivators



Weight, 80 lbs.

Price, \$9.00

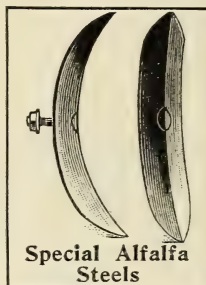
In response to a demand for a fore-carriage or truck we have made one which fits the Nos. 41 and 42 Cultivators, but a special attachment will be required for the No. 46.

The truck has two 16-inch electrically welded steel wheels sixteen inches apart. They have **ten** spokes with tires 2 inches wide and $\frac{3}{8}$ inch thick. The wheels are mounted on a 1-inch axle hinged in the center, so that one wheel can go over an obstruction without raising the other wheel off the ground. The support for this axle is pivoted and the double trees attached so that the team will steer the truck without side draft. There

is a vertical adjustment of the double tree of about 8 inches. The stub tongue takes the same braces as the regular tongue on the Nos. 41 and 42.

ALFALFA STEELS, $1\frac{3}{4} \times 9$ inches. Price, with bolt, 16 cents. Weight, 19 oz.

It has been found necessary to renovate alfalfa fields to get the best results. The ground often becomes hard and packed on top, and needs to be loosened up. These steels are specially designed for this work. They have a right angle section, enabling them to break and stir the soil without turning it upside down or tearing out the alfalfa roots injuriously. They are just what are needed for easy renovation, and for hard ground.



Special Alfalfa Steels

No. 42

Improved Planet Jr. Orchard and Universal Cultivator

Price, without extensions (9 teeth), \$42.00

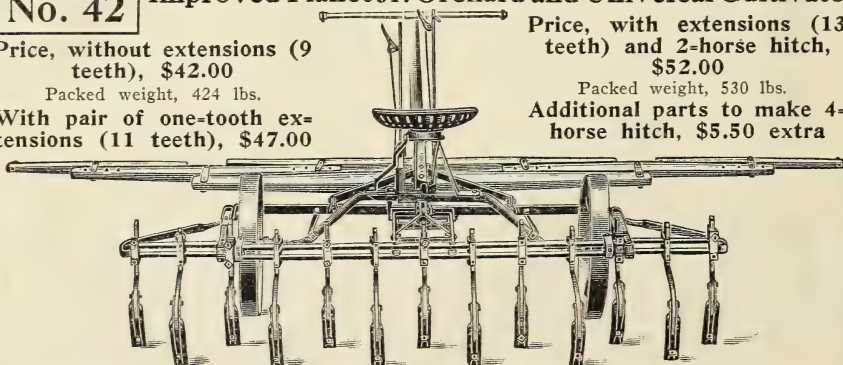
Packed weight, 424 lbs.

With pair of one-tooth extensions (11 teeth), \$47.00

Price, with extensions (13 teeth) and 2-horse hitch, \$52.00

Packed weight, 530 lbs.

Additional parts to make 4-horse hitch, \$5.50 extra



This is a heavy, strong tool for two, three or four horses; it cuts 7 feet 9 inches with extensions, or 5 feet 3 inches without extensions; the standards are high carbon steel, $1\frac{1}{2}$ inches by $\frac{5}{8}$ inch thick. It is a larger pattern of No. 41. In heavy ground it requires four to six horses. **Steel tongue.** Steels are $2\frac{3}{4}$ inches by 10 inches.

The wheels can be set 47 or 55 inches apart. No. 42 takes the same extras as No. 41. **Irrigating Steels** only, per set of four, \$3.35.

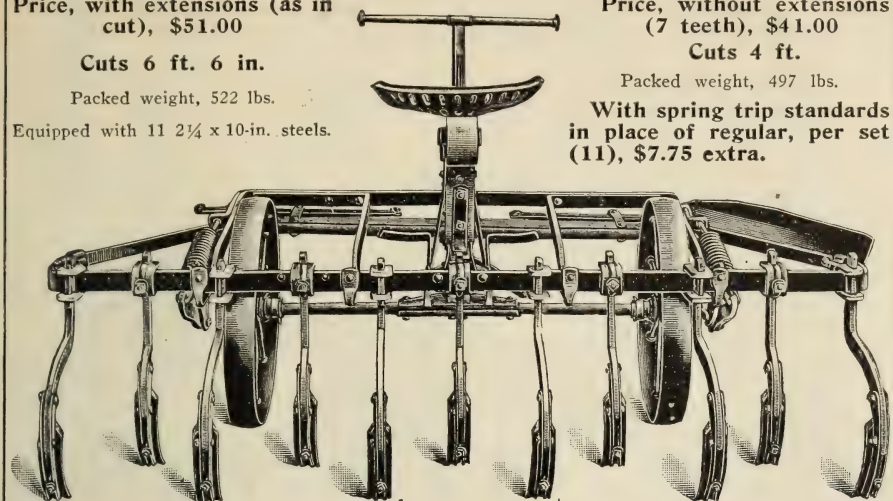
No. 46**Planet Jr. Orchard and Universal Cultivator****Price, with extensions (as in cut), \$51.00****Cuts 6 ft. 6 in.**

Packed weight, 522 lbs.

Equipped with 11 2¼ x 10-in. steels.

Price, without extensions (7 teeth), \$41.00**Cuts 4 ft.**

Packed weight, 497 lbs.

With spring trip standards in place of regular, per set (11), \$7.75 extra.

THE NO. 46 PLANET JR. ORCHARD AND UNIVERSAL CULTIVATOR is the newest and best example of this class of cultivator construction. Much liked in California and for alfalfa renovation. We can supply it equipped also with irrigation furrow cleaners, which clear the furrow for the wheels and secure regular depth and steady running; price, \$3.75 per pair. On the right side of the tool is a sheet steel guard to protect low-hanging branches and fruit.

A great improvement for 1915 is the new lock lever.

WHAT IT WILL DO. It cultivates shallow or deep any width, from 4 feet to 6 feet 6 inches, inclusive. It should be drawn by two, three or four horses, according to the depth of work to be done. For surface cultivation, or without extensions, two horses will suffice. For **very deep work** take off extensions and use but five teeth about ten inches apart, cutting only four feet. Sweeps may take the place of the cultivator teeth for level work and for thistle cutting; or a combination of cultivator teeth in front row with sweeps, 10-inch, in the rear, will work both deep and level. Irrigation steels and alfalfa steels fit the standards. (See page 70.)

The tool, with extensions, will work two rows of corn, potatoes, etc., planted from three to four feet apart, till the crop is eighteen inches high. For light surface work we sell a set of 14-inch discs as an extra. Price, \$4.00 per pair, or \$18.00 per set (5 pairs).

CONSTRUCTION. The tool is steel throughout.

The frame is heavy and strong, the tool bar being the last part to give way in strength tests.

The standards and extensions are the same weight as on Nos. 41 and 42, and, like the other parts, are made of high carbon steel.

The tongue can be set to one side for low branching trees by an extra attachment. When this is done the seat can be moved with the tongue or left in the center of the tool. It can also be set for different height neckyokes or teams. Price, \$2.25.

To use three horses add to the above tongue attachment a triple-tree and single-tree. The tool then works admirably and without side draft. Price for all, \$4.75.

The seat is quickly adjustable in height and back and forth to suit the needs or wishes of the operator.

This tool is the strongest, best and simplest we have ever offered.

TWO-WHEEL FORE-CARRIAGE. We can supply a special fore-carriage or truck with two 16-inch electrically welded steel wheels sixteen inches apart, with vertical adjustment of the double-tree of about eight inches. (See page 62). Price, \$9.00.

No. 46 B

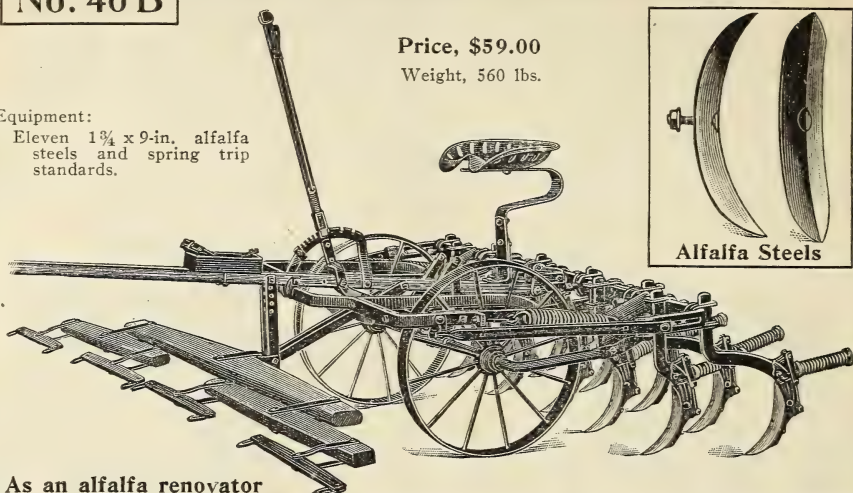
Planet Jr. Orchard and Alfalfa Cultivator

Price, \$59.00

Weight, 560 lbs.

Equipment:

Eleven $1\frac{3}{4}$ x 9-in. alfalfa steels and spring trip standards.



Alfalfa Steels

As an alfalfa renovator

In this form it is most serviceable for renovation of old alfalfa fields. It is admirable also for rooting out and destroying twitch and wire grass, and especially for deep work of all kinds.

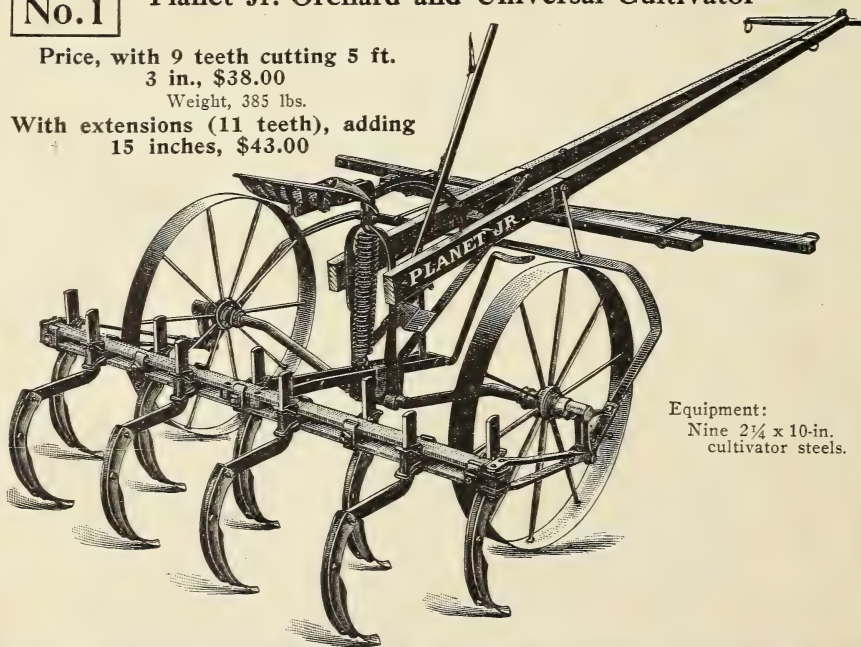
No. 1

Planet Jr. Orchard and Universal Cultivator

Price, with 9 teeth cutting 5 ft. 3 in., \$38.00

Weight, 385 lbs.

With extensions (11 teeth), adding 15 inches, \$43.00



Equipment:

Nine $2\frac{1}{4}$ x 10-in. cultivator steels.

THIS TOOL is an old favorite. Almost every steel we make fits it. Different widths single-trees supplied. **30-INCH WHEELS** set within the frame. Change from 42 to 48 inches. **THE STANDARDS** are adjustable up, down, sidewise and for pitch. **THE SINGLE LEVER** spring and roller make the lift and depth regulation easy.

This two-row cultivator is well built, strong and easily adjusted, with braced handle, strong steering arm, with carrying latch and jointed shaft connections.

IT WORKS TWO ROWS, 16, 18 or 20 inches apart.

IT IS STEEL THROUGHOUT except the handles and steers easily and promptly.

THE STEERING is done to perfection by the pivot wheel and hand lever.

THE HOES do admirable, close work and leave the ground nearly level.

THE WHEELS adjust for width.

Price, complete, with hoes, sweeps, etc., and a set of seven $1\frac{1}{4}$ x 8-inch cultivator steels and standards, \$25.00.

BEAN CULTIVATION requires close, thorough work, and this tool **steers** so perfectly that the closest possible cultivation can be done with it.

No. 53

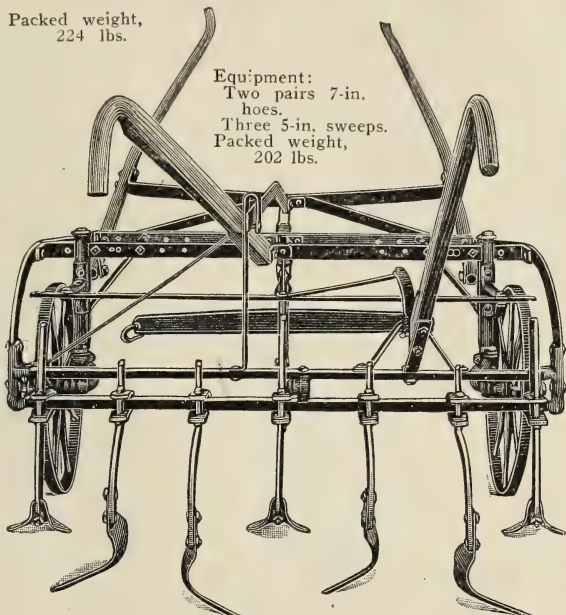
Planet Jr. Two-Row Beet and Bean Cultivator

Price, plain, as in cut, \$22.50

Complete, with cultivator teeth, \$25.00

Packed weight,
224 lbs.

Equipment:
Two pairs 7-in.
hoes.
Three 5-in. sweeps.
Packed weight,
202 lbs.



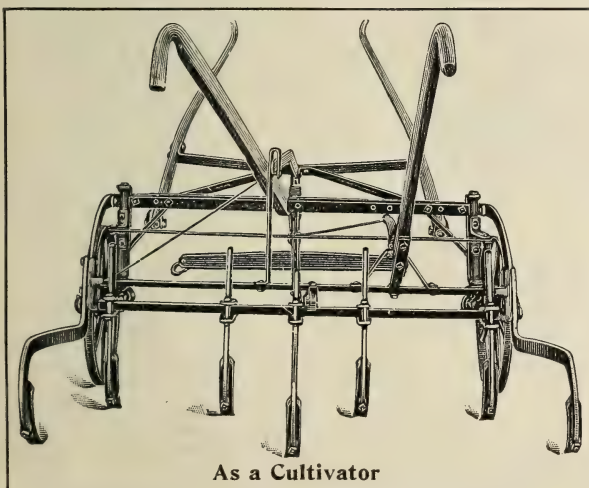
As a Weeder

It is intended to work two rows of beans at one passage within four inches of the crop on each side, requiring two additional pairs of wider **hoes** for this purpose. Price, \$1.10 per pair.

EXTENSIONS for cultivating beans to work 22 inches, 24 inches, 26 inches and 28 inches apart, \$2.00.

IRRIGATION STEELS with special standards, set of three, \$5.00 extra.

We also supply 12-inch **discs** to be used in place of hoes. Complete, per pair, \$3.25.



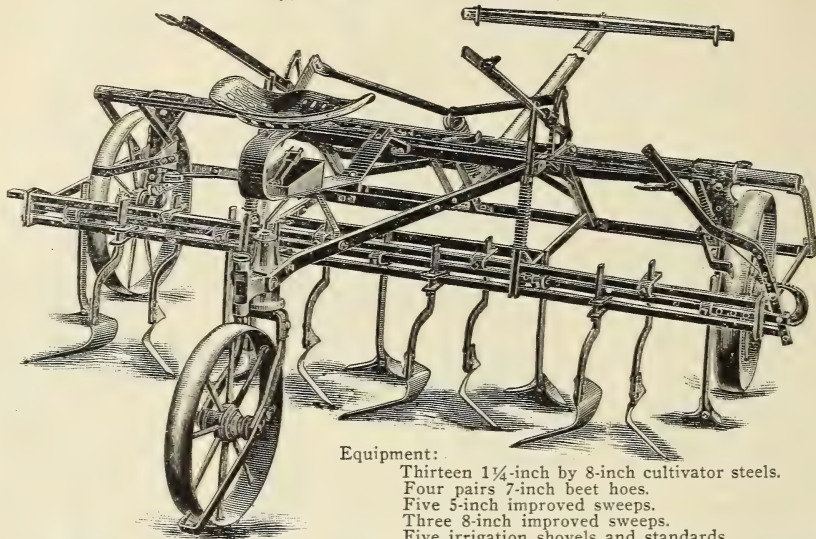
As a Cultivator

H. W. VAN TINE, R. R. 8, Fremont, Mich., writes March 12, 1912: "I think the No. 53 is the best thing I have seen in the line of a bean cultivator."

E. L. JEROME, Peirce City, Mo., writes April 25, 1913: "I have been using Planet Jr. tools for twenty years and prefer them to any other."

No. 3 Planet Jr. Four-Row Sugar Beet and Bean Horse Hoe and Cultivator

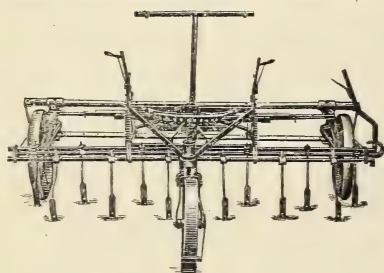
Price, including thirteen $1\frac{1}{4}$ x 8-inch cultivator steels and five irrigation shovels and standards, \$90.00. Packed weight, 684 lbs. Less cultivator teeth, \$83.00. Less cultivator teeth and irrigation shovels (as in cut), \$80.00. Packed weight, 600 lbs.



Equipment:

Thirteen $1\frac{1}{4}$ -inch by 8-inch cultivator steels.
Four pairs 7-inch beet hoes.
Five 5-inch improved sweeps.
Three 8-inch improved sweeps.
Five irrigation shovels and standards.

THIS MAGNIFICENT TOOL hoes four rows at once, 18, 20 or 22 inches apart, or three rows 24, 26, 28 or 30 inches apart, or two rows 36 inches to 42 inches. **Two levers**, assisted by a powerful spring, control the depth to a nicety or easily lift the tool bars clear. For 1915 we supply a two-wheel seat rig in place of one wheel, for **three-row** cultivation. Additional price, \$12.50. The **patent hoes** have a down cut next the row and shield the plant; the curved shape allows the closest hoeing at the surface, while rounding away from the roots. The standard is set over away from the beet tops and the front of the hoe is a leaf guard. **Recent** visits among the large beet growers of Colorado have resulted in many important improvements in this tool, as enumerated below. **The steering bar** and attachments for the pivot wheels now



Arranged as a Cultivator

work at a better angle and keep the tool under better control. **The tongue is balanced** by a heavy spring which removes weight from horses' necks. **AN EASY GANG LIFT** is a grand improvement. **Increased penetration** is secured, with better control of depth in hard ground. **New style clamps**, firm and accurate. **Countersinks**, to mark position of standards and set screws. **Umbrella socket**. **Improved wheel scrapers**. The wheels are changeable in width for all rows from 18 inches up. Six-inch hoe steels are sometimes better for **hard** land than regular beet hoes. Price, set of four pairs with standards, \$9.50.

PROF. ALVIN KEYSER, of the State Agricultural College, Fort Collins, Col., writes March 20, 1913: "We know the merits of your machines and have used some of them; in fact, are using some of them at the present time."

H. H. CASTWOOD, Oxnard, Cal., writes: "I consider your No. 3 Beet Cultivator by far the best that I have ever seen or used. Have used nearly all kinds on market to-day. We use them for cultivating beets, beans and peanuts. I consider the knives and sweeps as near to perfection as they could be made. Cannot recommend Planet Jr. beet cultivator too highly to any one wanting a good, well-made, high-class beet cultivator."

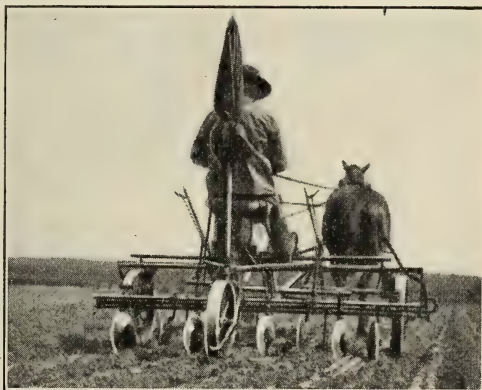


Four Planet Jr. No. 3 Four-Row Sugar-Beet and Bean Cultivators working sixteen rows of beets at one passage. California

THE PIVOT WHEELS act instantaneously, steering the tool with great ease. The 24-inch wheels we are sending out with these machines have twelve spokes instead of ten as heretofore.

THE TOOL BAR consists of three stiff steel bars, the middle one, to which the sweeps are attached, is stationary. The right-hand hoes are attached to the top, and the left hoes to the bottom bar. These bars are moved simultaneously in opposite directions by a convenient lever, instantly changing the distance between all the pairs of hoes at once as needed. The hoes and sweep are set for width by figures on the frame.

SPECIAL DISCS to use in place of hoes, \$3.25 per pair. Very much liked



Disc Cultivation with No. 3 Beet Cultivator

for early work and to prepare ground for seeding, using four or five on each side of center.

CRUST BREAKERS for use just as the seed is coming through. A pair straddles each row, and the outer edges bearing down the crust, cause it to crack upwards directly over the line of growing seed. Price, per set of four pairs, \$4.00.

Also a set of five **special irrigation steels**, with special standards, which work **behind** the hoes, hoeing and ditching thus being done at one passage. Per set, \$9.00.



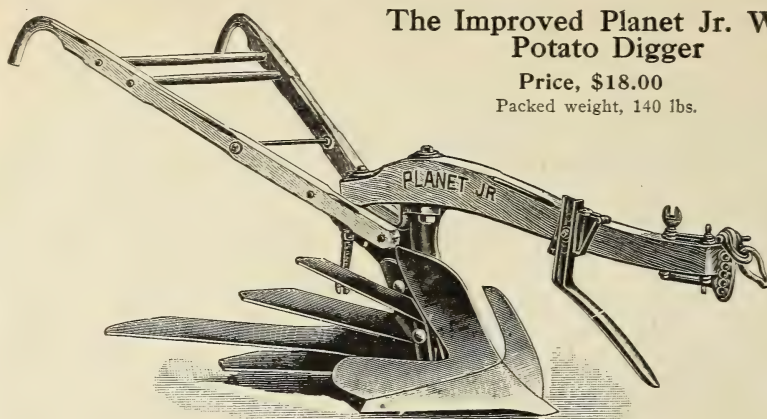
Irrigation Steel and Standard

The set of thirteen $1\frac{1}{4}$ x 8-inch steels with standards are valuable for late cultivation of beets or similar crops. Price, \$8.50.



Crust Breakers

FRITZ KNORR, in charge of the U. S. Government Experiment Farm at Scott's Bluff, writes from Mitchell, Neb.: "The machine (No. 3 Beet Cultivator) is doing good work. The special orchard attachments that we ordered for the machine are splendid. We shall take pleasure in recommending this machine at our farmers' meeting, and also display the cultivator at our farmers' picnic on this farm next week."



The Improved Planet Jr. White Potato Digger

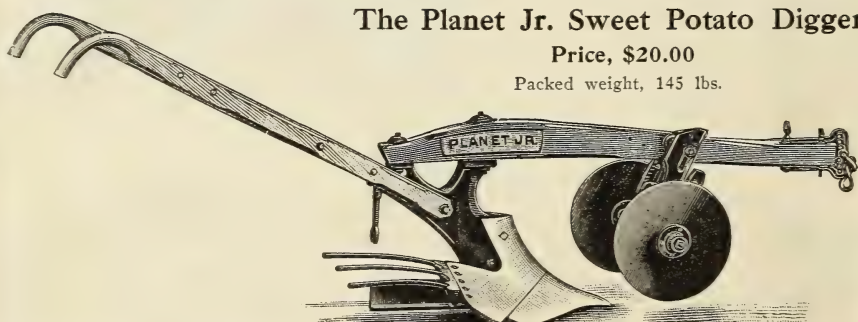
Price, \$18.00

Packed weight, 140 lbs.

The Planet Jr. White Potato Digger has been greatly improved recently. Instead of a digging head of tines, it now consists of successive shares which cut the furrow slice turned on edge by the front share and moldboard, into horizontal slices, throwing the vines and weeds to one side and pushing the potatoes to the surface.

Doubtless you would like us to say how they compare with the various four-horse diggers on the market. To answer this, the Planet Jr. White Potato Digger is equal to any for digging early, when the vines are green, the potatoes fast to them and the ground clean. A little later on when the vines are dead and the ground fairly free from weeds, the four-horse diggers do better work. At a later stage when the fields grow very grassy and weedy, the four-horse tools are almost useless, while the Planet Jr. even then does its work fairly well. If compelled to use but one digger early and late, the Planet Jr. is the best.

It costs but one-fourth or fifth as much, takes less than half the power to draw it, **does not skin the potatoes**, digs faster and costs less than one-twentieth as much for repairs; it will last almost ten times as long, with a few new shares and landsides.



The Planet Jr. Sweet Potato Digger

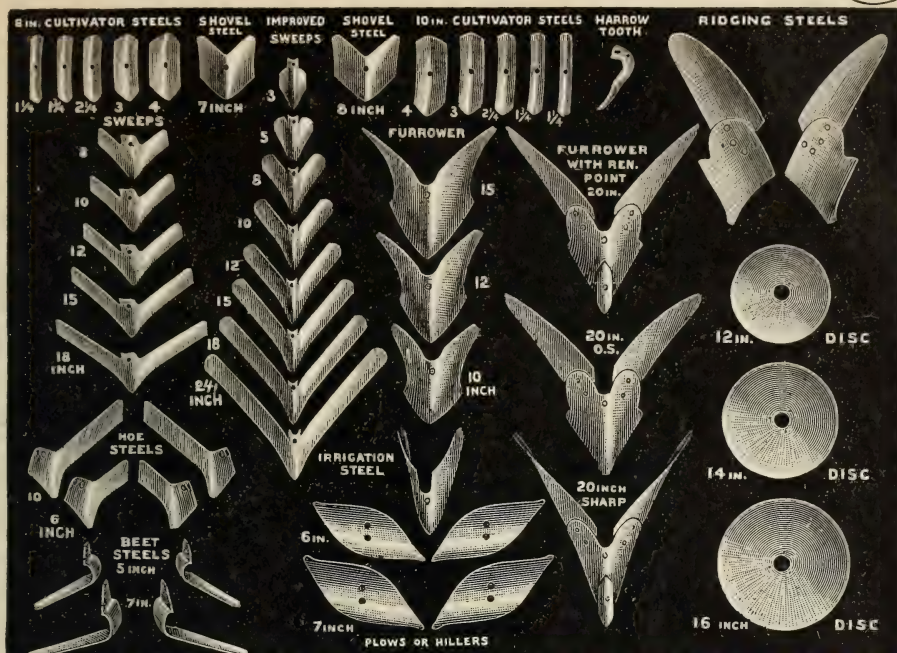
Price, \$20.00

Packed weight, 145 lbs.

This tool has been the standard in sweet potato districts for many years. It has been improved recently and we know of no digger that will give equal satisfaction.

For small farms where both white and sweet potatoes are grown; some farmers use it for white potatoes also, by removing the wheels and setting the moldboard to the proper pitch. While not at all equal to our regular White Potato Digger for this purpose, it is of advantage in getting out a crop.

C. D. NOTTINGHAM, Seaview, Va., writes July 19, 1913: "Your potato digger is a success. I expect to do a nice business next season."



STEELS. We make a large variety of Planet Jr. steel shapes of high carbon steel, all of our own special design. The above styles are much liked for working hard ground and for tearing out quack and wire grass, and for deep cultivation. They fit all Planet Jr. one and two-horse cultivators. For 1915 we can supply also some sizes made from special **soft center steel** for sticky clay or waxy soils, as noted in price list on page 72. Most of our steel shapes are covered by patents, and to enable customers to be sure of getting the right thing instead of inferior imitations, we stamp the trademark **Planet Jr.** on the back. See that you get them, for you need the best, and they are the cheapest in the end, as they are always full length.

CULTIVATOR STEELS. We make our regular cultivator steels of **beveled steel**, which is twice as thick down the center where the wear comes as at the sides, gradually tapering from one to the other.

This new shape causes the points to remain strong and they do not wear thin or into a notch at the point or bend as others do, so they give much longer service. **The 8-inch length** is made in five widths, and these fit all Planet Jr. Horse Hoes, Plain Cultivators, Pivot Wheel Cultivators and Orchard Cultivators. The 1 1/4 and 1 3/4 inches are for extra deep work; the 2 1/4 for general work in heavy soils; the 3-inch for light soil. This latter is the size generally used on all one-horse machines, with a 4-inch on the rear standard to fill up against the row and avoid an open furrow there. **The 10-inch length** is also made in five widths and fits all our two-horse cultivators except No. 72, the narrowest being used for deep work, the 2 1/4-inch for general purposes, and the 3-inch and 4-inch for light lands. All regular **Planet Jr.** Steels have our **patent bolt sleeves** to prevent bolts from pulling through.

ALFALFA STEELS, 1 3/4 x 9 inches. Price, with bolt, 16 cents.

It has been found quite necessary to cultivate alfalfa for the same reasons for which we cultivate many other crops and in order to get the best results. The ground often becomes hard and packed on top, and needs to be loosened up. These steels are specially designed to meet the needs of this work. They are formed from a right angle section of steel, thus enabling them to break and stir soil without turning it upside down or tearing out the alfalfa roots injuriously.

Section of Planet Jr.
Perfect Bevel Steel
Cultivator Steel

Alfalfa
Steel.

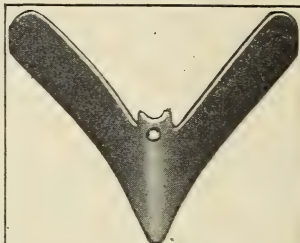


Regular Sweep

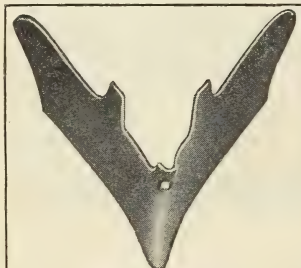
PATENT SWEEPS we make in two-styles.

REGULAR SWEEPS fit all one or two-horse cultivators, and are made to cut 8, 10, 12, 15, 18 or 24 inches. Particularly pleasing to growers of cotton, corn, coffee, sugar cane, etc., and in orange groves. They quickly exterminate quack grass and Canada thistles. On one-horse machines are generally used in sets of three (see page 45), or a single sweep may be used on the middle standard. The points adjust downwards, then being valuable for "dirtin cotton" and for hilling generally.

IMPROVED FLAT SWEEPS. Made to cut 3, 5, 8, 10, 12, 15, 18 or 24 inches. These are flatter than our regular sweeps and leave the ground more nearly level. They are particularly adapted to sugar beet and bean cultivation and for **level** cultivation generally. They will not fit our horse hoe **side standards**, but will fit all other standards on that machine, and also all standards on two-horse cultivators. The 3-inch are used for deep tillage and the wider sizes for shallower work.



Improved Flat Sweep

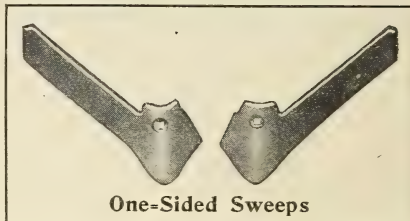


Fingered Sweep

FINGERED SWEEP. This cuts $14\frac{1}{2}$ inches; a great weed killer, it leaves the ground practically level. (See page 39.) Fits all our one and two-horse cultivators. Used on horse hoes, rear standard for **level** work.

ONE-SIDED SWEEPS. Made in four sizes, 8, $9\frac{1}{2}$,

11 and 14 inches. They are much liked for bean culture, being used on the horse hoes and cultivators, the short ends next to the row, and generally with a regular sweep in the center.



One-Sided Sweeps

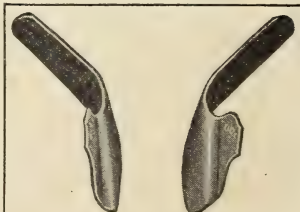


Hoe Steels

PATENT FLAT HOE STEELS. There are two sizes—6-inch cut and 10-inch cut—and they are growing in popularity year by year for market garden, cotton and corn cultivation and flat work generally. Horse hoes equipped with these hoes on the side standards and a 10-inch or 12-inch sweep on the rear make an admirable combination. The hoes cut clean, like the hoe steels on our hand machines, and are sure death to weeds. They fit all our horse hoe **side** standards and with a special standard can be used on our two-horse cultivators.

PATENT BEET HOE STEELS. These are made in three sizes, cutting 5, 6 or 7 inches. They fit our No. 3 and No. 53 Beet Cultivators and with **special standard** our twelve-tooth harrows or horse hoes. They are admirably designed and do beautiful work. They are shaped so as to act perfectly as **leaf guards** and also to work very close to the row at the surface while curving away from the roots underneath.

FOR 1915 WE MAKE the 7-inch size with a cutting edge slanting five degrees more than the above style, which are much liked in weedy crops. Both styles are made of steel heavy enough to be forged out to a thin edge when dull.



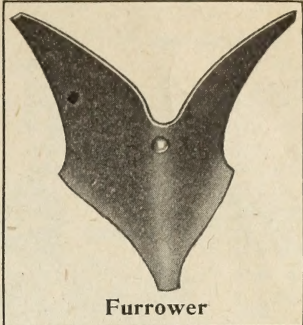
Beet Hoe Steels

71 REPAIRS AND EXTRAS FOR HORSE TOOLS

FURROWERS. We make six styles and sizes. The 10-inch, 12-inch and 15-inch are one piece and designed on fine lines. The 20-inch are made in three styles—with regular body, adjustable wings and renewable point; with **sharp** body, adjustable wings and renewable point, and with regular body and wings **without** renewable point. The first style is sent unless otherwise ordered. The wings can be set to make narrow or wide furrows and do grand work in hilling. They can be removed if desired and the **body** then makes a neat double plow for opening sharp-bottomed furrows. The renewable point is very economical. These furrowers fit all one and two-horse cultivators.



Half Furrowers

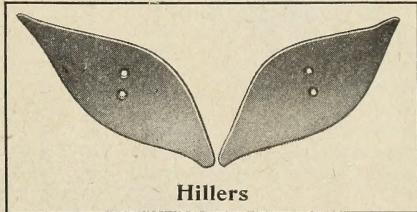


Furrower

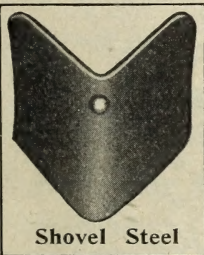
HALF-FURROWER. This fits all cultivators and horse-hoe standards, and is used for earthing up or throwing a furrow, but will not throw as high as the regular side steels.

RIDGING STEELS. One sided furrowers throwing one way only fit horse hoe side standards only.

PATENT HILLERS. Two sizes, 6 and 7 inches wide, used as plows on the horse hoe and, by reversing, as hoes. They have our patent plow points, are reversible for wear as well as for the two kinds of work, hilling and hoeing. They fit all our horse-hoe side standards and with special clips (576-577) can be attached to Plain Cultivator, Riding and Universal Cultivator standards. The patent plow points give increased penetration and wear.



Hillers

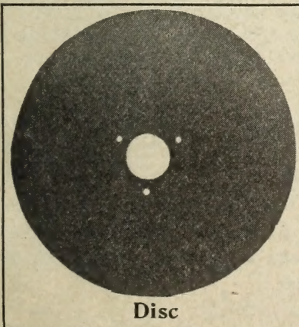


Shovel Steel

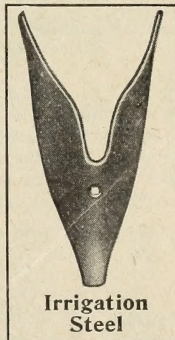
PATENT SHOVEL STEELS. Two sizes, 7 and 8-inch. These are exactly the right shape to use on the rear horse hoe or cultivator standards to fill up behind the side plows. The 7-inch are used on one-horse tools and the 8-inch usually on two-horse cultivators. Also used on the latter for marking and furrowing.

IRRIGATION STEEL. Special design and adapted particularly for opening irrigating furrows. Fits all Planet Jr. Cultivators.

DISCS. Made in three sizes. The 12-inch are used on horse hoes, cultivators, Beet and Pivot Wheel Cultivators. The 14-inch on Pivot Wheel Cultivators and the 14 and 16-inch on Universal Cultivators.



Disc



Irrigation Steel

Most of our steel shapes are covered by patents and to enable customers to be sure of getting the right thing instead of inferior imitations, we stamp the name Planet Jr. on the back. See that you get them, for you need the best and they are the cheapest in the end.

W. J. HUGHES, Chadbourne, N. C., writes July 19, 1909: "The 18-inch Sweep is just the thing to keep the grass and weeds down. I can now cultivate my truck with about half the expense."

MR. NATHAN J. HUNTING, Shutesbury, Mass., writes April 24, 1914: "I have a Planet Jr. Cultivator I have used every year for about 25 years."

Planet Jr. REPAIRS AND EXTRAS FOR HORSE TOOLS 72

	No.	Price	Weight Lbs. Oz.		No.	Price	Weight Lbs. Oz.
1 1/4 x 8-inch Steel	1156	\$0 09		20-inch Furrower, New Style and Bolt	292x	\$2 25	12 5
1 3/4 x 8 " "	2367	10	11	20-inch Furrower, Sharp and Bolt	293x	2 25	11 8
2 1/4 x 8 " "	2368	11		Wings for 20-inch Furrower, pr.		1 40	7
3 x 8 " "	2369	12	14	Point " 20 " " each		20	11
3 x 8 " " soft center	2849	20	1 2	Half Furrowers, per pr.	3580/1	60	3
4 x 8 " "	2370	13	1 2	Ridging Steels	294x	2 40	13 10
1 1/4 x 10 " "	1888	13	13	Irrigation Steel	2248	85	4 5
1 3/4 x 10 " "	1249	14	14	Teeth for Twelve-Tooth Harrow	1229	20	14
2 1/4 x 10 " "	1199	17	1	Vine Turner for No. 10 Horse Hoe (special)		2 25	8 4
2 3/4 x 10 " " soft center	2853	30	1 3	Vine Turner for Nos. 7, 8 and 9 Horse Hoes		2 25	7 13
3 x 10 " "	1200	19	1 1	Plow Attachment for Horse Hoe		4 00	32
4 x 10 " "	1201	22	1 8	Roller " " " "		2 25	16
1 3/4 x 9 " Alfalfa Steel and Bolt	3241	16	1 2	Seven-Tooth Attachment, wide..		1 65	14
8-inch Sweep Regular	1169	30	1 4	" " " narrow		1 65	10 8
10 " " " "	1170	35	1 6	Nine-Tooth " "		7 25	45 5
12 " " " "	1171	40	1 9	Hilling Attachment for Horse Hoe		3 85	14 5
15 " " " "	1172	45	1 14	Runner Cutter Attachment (Har.)		1 85	5 8
18 " " " "	3148	55	2 2	Sweep Attachment (Harrow)		1 35	4
24 " " " "	3491	80	2 13	Beet Hoe " " "		1 40	5
Improved Sweeps do not fit Horse Hoe Side Standards.				Wheel (Cast), including arms		85	6 8
3 " Imp. Sweep and Bolt	2731	23	14	" (Steel), " " "		1 05	6 5
5 " " " " "	1494	28	15	Pulverizer for Horse Hoe		2 00	8 8
8 " " " " "	1495	33	1 6	" " Harrow (special)		2 00	7 11
10 " " " " "	1496	38	1 10	Wrench (hand and one-horse tools)	3	12	4
12 " " " " "	1497	44	1 14	Wrench (two-horse tools)	H4	30	13
15 " " " " "	1498	50	2 5	Handles (Steel) for Horse Hoes, per pair		1 00	8 5
18 " " " " "	1499	60	2 10	Handles (Wood) for Horse Hoes, per pair		80	5 11
24 " " " " "	3582	90	3 3	Discs, 12-inch for Nos. 72 and 76, pair		4 25	27
Fingered Imp. Sweep and Bolt	2816	1 00	3	Discs, 12-inch for Horse Hoes, pr.		3 75	24
8-inch One-Sided Sweeps, pr.	3583/4	70	2 4	" 12 " " Nos. 3 and 53,		3 25	18 11
9 1/2 " " " "	3585/6	80	2 8	" 14 " " " 72 and 76,"		4 75	32 5
11 " " " "	3587/8	1 00	2 12	" 14 " " " 1, 41, 42		4 00	26 11
14 " " " "	3589/90	1 20	3 6	and 46, per pair		4 50	33 11
6 " Hillers, L. & R. H.	1167/8	1 00	4 10	Discs, 16-inch for Nos. 1, 41, 42 and 46, per pair		1 50	12
6 " " " soft center	2856/7	1 60	6 2	Center Tooth Attachment for No. 76		1 50	8 11
7 " Plows, L. & R. H.	495/6	1 20	5 6	Bolts for all Steels		02	1
6 " Hoe Steels & Bolts	1163/4	90	2 10				
10 " " " " "	1165/6	1 10	3 12				
5 " Beet Hoe Steels	2144/5	90	2 6				
6 " " " " "	2881/2	1 00	2 10				
7 " " " " "	2188/9	1 10	3				
7 " Shovel Steel	2539	25	1 9				
7 " " " soft center	2860	50	2 5				
8 " " " " "	2540	30	1 12				
8 " " " " soft center	2861	65	2 6				
10 " Furrower	1161	80	3 5				
12 " " and Bolt	2621	1 00	4 5				
15 " " " " "	1162	1 20	6 5				
20 " " Old Style and Bolt	291x	1 90	12 8				

EXTENSIONS

1 Tooth (on each side) for No. 1	5 25	28
1 " " " " " " 41	5 25	28
2 " " " " " " 41	10 50	106 5
2 " " " " " " 46	10 50	101 5

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Imitation is sincere flattery. No coasters ever made have had so many abject imitators. Why?—because of their perfection; their quality has been maintained for twenty years and they are improved for 1915. Special catalogue on request.

S. L. ALLEN & CO., Philadelphia



Flexible Flyer

The ideal Christmas gift for boys and girls

Nowadays the boy and girl looking for the greatest fun want more than a steering sled—they want the Flexible Flyer whose grooved runners enable them to steer at full speed without skidding, dodge around obstacles, and out-distance all other sleds.

Flexible Flyer makes its owner king of the hill because it is

the only sled with grooved runners

The "Goose neck" design is another exclusive and important feature.

Flexible Flyer goes faster, steers truer, controls easier, and is safer than any other sled ever invented. Its famous steering bar does away with dragging the feet, and the consequent wear and tear on boots and shoes; prevents wet feet, colds, and doctor's bills.

Outlasts three ordinary sleds

The Flexible Flyer is strong and durable in construction. It is light enough to easily pull uphill.

Eight sizes, carrying 1 child to 6 adults.

If your dealer can't supply you, send your order to us and give us his name. We will ship—express prepaid east of the Mississippi—upon receipt of price named here.

No. 1, 38 in. long, \$2.50

No. 2, 42 in. long, 3.00

No. 3, 47 in. long, 3.75

No. 4, 52 in. long, \$ 4.50

No. 5, 63 in. long, 6.00

No. 6, 101 in. long, 12.00

Flexible Flyer Racer, 56 in. long, \$4.25

Flexible Flyer Tuxedo Racer, 60 in. long, \$6.00

Look for
this trade mark



Insist on
the genuine

UNLESS IT BEARS THIS TRADE MARK IT ISN'T A FLEXIBLE FLYER

Planet Jr.

